

48th ANNUAL REPORT



FLORIDA AGRICULTURE:
Key to the Future

FOR THE FISCAL YEAR JULY 1, 1977 TO JUNE 30, 1978
FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
DOYLE CONNER, COMMISSIONER OF AGRICULTURE



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Letter of Transmittal

The Honorable Robert Graham
Governor of Florida
Tallahassee, Florida 32304

Dear Governor:

To fulfill statutory requirements, it is my pleasure to submit to you and members of the state legislature, the 48th annual report of the Florida Department of Agriculture and Consumer Services.

This report lists and points out the services and programs provided by the department for the fiscal year from July 1, 1977 to June 30, 1978. The information contained in this report will reflect the increased importance of the changes in agriculture and consumer needs in our state.

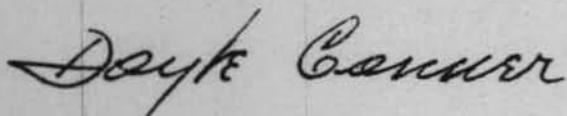
Not only has Florida agriculture continued to grow, but the public has become increasingly aware of activities in the area of consumer services.

There have been significant advances in every division within our department. But to conserve paper and other costs, this report will highlight only a few of the major priorities during the year.

I wish to express my appreciation to all department employees for their dedication and spirit. By like token we are grateful for the assistance and cooperation which we received from every segment of related industries and from all levels of state government.

We offer this report for your consideration and information.

With warm personal regards,



Doyle Conner
Commissioner

WELCOMING FLORIDA TO INDEPENDENCE



Doyle E. Conner became Florida's seventh Commissioner of Agriculture in January, 1961. Prior to his election to this office Conner served 10 years in the state legislature and was the youngest member ever to be elected Speaker of the House. Conner was born in Starke, Fla. on December 17, 1928 and was graduated from the University of Florida with a bachelor's degree in agriculture. He is a past president of the University of Florida Alumni Association, National Association of State Departments of Agriculture and Southern United States Trade Association. In early 1976 Conner was named one of 76 "Florida Patriots" by the Florida Bicentennial Commission.



Harold H. Hoffman became Assistant Commissioner of Agriculture in April, 1965. He joined the department in 1940 as a chemist in the Division of Chemistry's feed laboratory, was named laboratory chief in 1948 and associate state chemist in 1959.

Born March 29, 1914, in Jefferson County, Nebr., Mr. Hoffman attended elementary and secondary schools in Winter Haven, Fla. He was graduated from the University of Florida in 1938 with a bachelor's degree in chemistry.

DIVISION OF ADMINISTRATION

John S. Shipp was appointed director of the Division of Administration on November 1, 1975. Prior to this he had been employed by the state treasurer's office and the Department of Education as well as having served for six years in the Florida House during the late 1950's. Shipp holds a bachelor's degree from the University of Florida as well as a master's degree from Florida State University. He was born in Williamson, Ga. on March 17, 1918 and served both in the army and navy during World War II. In addition to his service with the state, Shipp also has experience as a school teacher/administrator and as a publishing company executive.



Bureau of General Services

This bureau is responsible for departmental purchasing, maintenance, grounds, duplicating and printing, mail distribution, supplies, communication, and coordinating all records management with Board of Archives and Records Management. Work involves the development of procedures necessary to carry out these responsibilities.

Bureau of Information, Education, and Research Services

This bureau is responsible for providing the general public with information regarding those areas that come under department jurisdiction. In fulfilling that responsibility, the bureau processed 23,285 information inquiries during the fiscal year. In addition, 90,575 pieces of literature were distributed.

Utilizing the cooperation of the various media, the bureau prepared 280 news stories for distribution. Broadcast items produced numbered 335 and kept the statewide agricultural radio network supplied with accurate and timely agricultural information.

A total of 105 speeches and manuscripts were also prepared by bureau information specialists. A staff photographer completed 260 photography assignments.

The bureau is also responsible for editing the annual report and an employee newsletter.

Two major publications, *Light Horse Production in Florida* and *Native Trees and Plants* are currently being revised. In addition, *Summarizing Florida Agriculture* has been updated.

Bureau of Public Fairs and Expositions

It is the duty of this bureau to administer the provisions of Chapter 616 Florida Statutes relating to fairs and expositions. This bureau is responsible for issuing all fair permits and tax exemption certificates to fairs chartered under Chapter 616 Florida Statutes.

It is the duty of this bureau to inspect all midway companies operating at chartered fairs for operational safety, electrical safety and fire prevention requirements.

This bureau coordinates all departmental exhibits and displays at county, regional and state fairs; agricultural expositions, agricultural mall promotions, state and national livestock events held in Florida.

The bureau also distributes the Commissioner of Agriculture Premiums and Awards Revolving Fund. These monies go to the forty-six Florida fairs and to many scholarships and judging teams of 4-H Clubs, Future Farmers of America, Future Homemakers of America, and Florida's universities involved in agricultural programs.

Bureau of Management Systems

This bureau is responsible for providing technical systems assistance to all divisions of the department, as well as providing a centralized data processing service.

The operating objective of the management systems staff is the co-ordinating and development of management information and control systems to reduce operating time and lower costs, and to assist management operations.

The major areas of responsibilities within the management systems staff are: administrative policies and procedures as related to data processing, systems design for all divisions, special management improvement studies and systems research, and overall coordination of the department's EDP services requirements.

Bureau of Personnel

Personnel is responsible for the maintenance of the official records of this agency's employees, administration of the state uniform pay plan, employee relations and training, and for the administration and interpretation of the personnel rules and regulations of the Career Service System.

The 1978 Legislature passed a significant retirement bill regarding the 30 year retirement provisions. This legislation allows for the retirement of a state employee under FRS after 30 years of service and is provided at no additional cost to the employee. Pre-retirement seminars are being offered through the personnel office in conjunction with the Division of Retirement, Department of Administration.

Another significant change this year has been the conversion of the State Group Health Insurance plan from private carrier to self-insurance by the state.

The cyclical classification study being conducted by the Department of Administration and our department has been completed. This study encompassed a total review of all positions either through a desk audit or a review of the position description to insure the proper classification of each position. In addition, a review was made of all class specifications utilized by the department and many of these were changed to reflect up-to-date duties and responsibilities or changes in the minimum training and experience requirements. An extensive survey and evaluation of all pay grade assignments was also conducted. We feel this study has been of mutual benefit, not only to the Department of Administration, but to all divisions throughout our department.

The personnel office has been delegated classification authority through an administrative rule and subsequent legislation. This authority will allow classification matters to be handled in a more expeditious manner.

Approximately 65 more employees have received training in first aid and cardio-pulmonary resuscitation. All departmental facilities now have employees certified to provide this emergency care.

At the present time, approximately 1300 employees in the department are members of collective bargaining units and are covered by contract. The two unit contracts in effect at this time are the Professional and the Operational Services. Even though employees are members of the bargaining unit and are covered by the contract, union membership (dues paying) is optional with each individual employee. It is anticipated that at least two additional bargaining units affecting employees of this department will be established in the future. A comprehensive training program regarding collective bargaining contract administration for supervisory personnel is being conducted.

Bureau of Accounting and Budgeting

Accounting and Budgeting is responsible for all accounting functions of the department's revenues and expenditures which totaled \$61,840,198 and \$60,227,015 respectively in 1977-78. Other functions include property management, federal grant-in-aid activity, planning and budgeting.

On July 1, 1979, the Bureau of Accounting and Budgeting will adopt the Departmental Accounting System (DAS). This is a statewide double entry General Ledger Accounting System which was developed by the Office of the Auditor General. It is a computer based system whereby Accounting and Budgeting personnel will enter all data into the records by use of on-line data entry computer terminals which are physically located within the bureau.

Each Accounting and Budgeting employee has attended a two-week course on DAS which was conducted by the Offices of the Auditor General and the Comptroller. The course covered developing the codes and accounts, validating usable information, coding source documents, understanding and use of the computerized reports, and coding data into the terminals.

During 1977-1978, the bureau developed its Chart-of-Accounts and titled and validated usable codes. The terminals have been installed, serviced and are ready for use. The bureau will be deeply involved in this conversion to the new system during the coming year.

DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES 1977-78 Annual Report—Accounting and Budgeting

	Amount	% of Total
Revenue: (By Source)		
Charges for Current Services	\$ 19,039,585.00	30.8
Licenses and Permits	188,116.00	.3
Use of Money and Property	5,702,340.00	9.2
Other Agencies	4,823,649.00	7.8
General Revenue	32,086,508.00	51.9
 Total Revenue	 <hr/> \$ 61,840,198.00	 <hr/> 100.0
 Expenditures:		
Salaries and Benefits	\$ 38,939,430.00	64.7
Other Personal Services	1,813,471.00	3.0
Expenses	9,897,153.00	16.4
Operating Capital Outlay	1,768,848.00	2.9
Law Enforcement Salary Incentives	4,534.00	.0
Data Processing Services	667,747.00	1.1
Payment to Marketing Service — U.S.D.A.	63,326.00	.1
Grants and Aids	871,734.00	1.5
Forestry Research	70,000.00	.1
Automated Testing Equipment	89,100.00	.2
Soil and Water	388,615.00	.6
Indemnities	1,422,294.00	2.4
Citrus Blackfly	2,105,152.00	3.5
Fire Ant Control	132,737.00	.2
Debt Service	363,988.00	.6
Certifications Forward	931,467.00	1.5
Fixed Capital Outlay	697,419.00	1.2
 Total Expenditures	 <hr/> \$ 60,227,015.00	 <hr/> 100.0

DIVISION OF ANIMAL INDUSTRY

Dr. Clarence L. Campbell received his veterinary medicine degree from Ohio State University in 1945. Later that year he joined the Florida Livestock Sanitary Board as a field veterinarian. He became assistant state veterinarian in 1948, acting state veterinarian in 1952 and state veterinarian in 1953. Dr. Campbell was born September 24, 1921 in Indianapolis, Ind., attending Sebring, Fla., public schools and Florida Southern College.



The Division of Animal Industry is organized and functions under authority contained in Chapter 570, Florida Statutes. The division is responsible for the enforcement of laws relating to animal and poultry health and welfare, inspection of red meat and poultry food products, livestock thefts, and the regulation of horse sales, shows and exhibitions.

The Animal Industry Technical Council serves in an advisory capacity to the Commissioner of Agriculture and the Director of Animal Industry. The council holds public meetings at least once each quarter to consider the needs of animal industry, and makes recommendations for changes in laws or rules affecting the division's programs. The council is composed of ten members representing segments of the industry affected by the operations of the division.

Four meetings of the council were held at various locations in the State during the year of this report.

Administrative Unit

The director's office provides administrative, clerical and fiscal support as well as direction and supervision of the operating units and bureaus of the division.

Maintenance Unit

Basic services provided by this unit include the maintenance of all automotive vehicles, laboratory building and equipment, and field equipment essential to program operations.

Marks and Brands Unit

Investigators for this unit were extremely active during this year. These employees assisted local law enforcement agencies in 103 cases of reported thefts of livestock and farm equipment. Items reported stolen included 700 head of cattle, two horses, 85 hogs, valued at \$202,546, and miscellaneous equipment valued at \$20,000. Field investigators assisted in the recovery of 67 cattle, one horse, one horse trailer and one saddle with a total value of \$41,200. Arrest warrants were secured for 37 persons for theft or other vandalism involving livestock.

The unit issued 1,157 livestock hauler permits, 218 original livestock brand certificates, and 1,572 renewal certificates. Total funds collected amounted to \$15,623.19.

Equine Disease Control Unit

No cases of equine piroplasmosis were reported during fiscal 1977-78. This is thought to be significant evidence that our program which is designed to control the tick vector has been effective. Activities during this period which pertain to equine piroplasmosis control included the inspection of 56,514 equines, of which 302 were found to be infested with the tropical horse tick. Participation in the program by horse owners is on a voluntary basis, consequently complete eradication of the tick is not to be expected under the present operation.

Personnel of this unit assisted the Bureau of Contagious and Infectious Diseases in conducting the equine infectious anemia program in Dade and Broward counties.

Bureau of Contagious and Infectious Diseases

This bureau performs in the area of disease surveillance and disease control. Inspections of livestock passing through 29 auction markets in the state were conducted by personnel of this bureau for evidence of disease or disease vectors. Cattle passing through markets are identified by backtag for traceback purposes in the event brucellosis or tuberculosis is discovered at the slaughtering establishment.

On farm inspections were also conducted of cattle, swine and horses. All premises feeding garbage to swine are permitted by the bureau and field inspectors observe cooking operations and swine fed garbage at least twice monthly. 526 garbage feeding operations were inspected during the period. 109 supervised feeder pig sales were held during the year. Field personnel inspected 397,748 swine for 6,840 owners and tagged and permitted 138,161 pigs for consignment to these sales.

The equine infectious anemia control program has progressed steadily since its inception in 1973. Operations were somewhat hampered during this year by litigation and an ambiguous ruling in a Broward county case wherein the validity of the agar gel immunodiffusion test was questioned. This ruling is pending appeal to the District Court of Appeals. The testing of horses has continued at a steady level and 570 EIA reactors were found. This represents an infection rate of 1.03 percent, as opposed to approximately 10 percent at the outset of the program.

Personnel of this bureau enforced horse soring and drug abuse laws at 100 horse shows in the state. An additional 20 shows were covered by contractual agreement with the American Horse Show Association. A total of 797 urine samples and 437 blood samples were collected for laboratory examination for prohibited drugs. Soring inspections were made on 164 horses.

No screwworms or cattle fever ticks were found in Florida. Of 202 tick specimens collected, 73 were *D. nitens*, or tropical horse ticks, which is the vector of equine piroplasmosis. All others were of harmless varieties. The tropical horse ticks were collected in Dade, Broward, Palm Beach, and Lee counties. All 64 larvae collections were other than screwworms.

Bureau of Poultry Services

The Bureau of Poultry Services is responsible for the control and eradication of infectious and contagious diseases of poultry. The bureau also administers the National Poultry Improvement Plan in Florida. Specific disease control programs are conducted in regard to *S. pullorum*, fowl typhoid, *M. gallisepticum*, and *M. synoviae*. In addition, eradication or control measures are instituted when other diseases constitute a threat to the poultry population, such as infectious laryngotracheitis or exotic Newcastle disease.

The bureau is also responsible for enforcing the law requiring all hatcheries and poultry farms to provide for sanitary disposal of dead birds and hatchery residue. Health certification covering movement of all live poultry into the state, and health certification for exportation of chicks, pouls, and hatching eggs is also provided by this bureau.

Forty-three hatcheries and dealers and 193 poultry breeding farms, with approximately 1.2 million breeder birds comply with the requirements of specific disease control programs under the supervision of this bureau. All hatchery supply flocks must maintain a negative status for *S. pullorum*, fowl typhoid, *M. gallisepticum*, and *M. synoviae* diseases. Periodic inspections and tests must be made to assure that standards of sanitation and disease criteria are met. Hatchery air and swab sampling for presence of bacteria is routinely employed during hatchery inspections.

Periodic inspections of disposal facilities of hatcheries and poultry farms for compliance with the Dead Bird Disposal Law are made on over 1200 hatcheries and broiler, layer, and breeder farms. During the twelve month period ending June 30, 1978, 142 permits covering 910,810 birds were issued for the importation of poultry into the state. During the same period, health certificates for export purposes were issued covering 9,808,231 dozen hatching eggs and 11,536,611 chicks, poultry and miscellaneous birds.

The poultry industry is kept abreast of disease developments that would affect their operations. This is accomplished through attendance at association meetings, direct mailouts, cooperative communication through the monthly Poultry Federation newsletter, and mailouts from the poultry department of the University of Florida.

Bureau of Brucellosis and Tuberculosis

Brucellosis continues to be the disease of major significance to Florida's cattle industry. The number of infected herds has steadily increased and by the end of the year, 661 herds were under quarantine. One major cattle producing county lost modified certified status due to high herd infection rate, and it will be necessary to retest all herds in the county until the herd infection rate is reduced to less than 5 percent before status can be restored.

The adult vaccination program has been very effective in reducing the rate of cattle infection in problem herds. This program has been extended to 85 dairy herds and 44 beef herds. Since adult vaccinated cattle are restricted in movements only for feedlot or immediate slaughter, owners of beef herds have been reluctant to select this program. It is hoped that research now being conducted on adult vaccination will result in the removal of restrictions from vaccinated animals and permit them to move freely in commerce.

During the year three dairy herds and one beef herd totaling 2,447 cattle were completely depopulated due to the tuberculosis infection. Three herds remained under TB quarantine at the close of the year.

Bureau of Diagnostic Laboratories

During the past fiscal year a concerted effort has been made to increase the technical capabilities of the Diagnostic Laboratories. The greatest emphasis has been in the area of diagnosis of viral diseases. Implementation of microtiter techniques made feasible the processing of large numbers of samples for the detection of viral antibodies to such diseases as Infectious Bovine Rhinotracheitis (IBR), Bovine Viral Disease (BVD), Parainfluenza 3 (PI-3), Viral Encephalitides and Pseudorabies. Establishment and maintenance of additional tissue culture cell lines and improvements in techniques increased the capabilities of the laboratories to isolate and identify various mammalian and avian viruses.

Testing of bovine serum samples for the presence of Bovine Lymphosarcoma (Bovine Leukemia Virus) antibodies by the agar-gel immunodiffusion test was also instituted. This test currently is done only when required for export, but will be extended to all cattle once the true significance of positive animals has been established. The card test for the detection of Anaplasmosis was also instituted.

The occurrence of Contagious Equine Metritis (CEM) in Kentucky in March necessitated immediate institution of procedures for the isolation and identification of the CEM organism. Transport media was supplied to equine practitioners. Through the courtesy of the Division of Forestry, field samples were flown from Ocala to Kissimmee on an "as needed" basis. No isolations of the CEM organism were made.

Several isolations of pseudorabies virus were made from dogs that had been in contact with feral hogs. Previously reported serological tests have shown that the feral hogs of Florida have a high incidence of antibodies to pseudorabies.

Testing for leptospiral antibodies by the microtiter microscope agglutination test (MA) indicated no basic change in the incidence of leptospiral antibodies in cattle and swine. The serotype *hardjo* continues to be predominant in cattle, and the serotype *grippotyphosa* predominant in swine.

At the request of veterinarians, poultry producers and regulatory personnel, field trips were made by personnel to poultry, swine and dairy farms to assist in diagnosis of disease and provide technical assistance and recommendations in the control of disease. Laboratory personnel also attended formal training courses which included laboratory procedures for the detection and isolation of pseudorabies, equine infectious anemia, anaplasmosis, and contagious equine metritis.

Animal Industry Technical Council

R. D. BENNETT	Beef Industry
GERALD CAYSON	Beef Industry
JOE A. HILLIARD	Beef Industry
O. L. PARTIN, Chairman	Beef Industry
ROBERT W. HALL	Dairy Industry
JOE M. O'FARRELL	Horse Industry
PETE CLEMONS, Vice Chairman	Independent Agriculture Markets
ERWIN BRYAN	Meat Packing Establishments
HENRY W. LAND	Poultry Industry
ELLIS PUTNAL	Swine Industry

C. L. CAMPBELL, D.V.M.
State Veterinarian and Director

Bureau of Meat Inspection

The meat and poultry inspection program in Florida is conducted under memorandum of agreement with the U.S. Department of Agriculture, and financed with 50-50 matching state and federal funds. Under the terms of the agreement, plants under state inspection must be at least equal to federal plants in quality of inspection.

The program provides assurance to the consumer of clean, wholesome, unadulterated meat and poultry food products. In addition, the service provided by this program assists in livestock disease control and pesticide residue programs. Purchases of meat and poultry food products by tax paid institutions are certified to make sure that the products meet the specifications.

Over 750 million pounds of red meat and poultry products were produced in 61 slaughter and 263 processing plants under state inspection. All establishments are in full compliance with federal standards. Also, 83 plants conducting custom slaughtering and processing of meat animals for private consumption are under surveillance of the bureau to see that adequate sanitation practices are maintained.

There has been an increase in the number of small slaughter and processing plants during the past year indicating a trend toward the location of small plants in rural areas closer to the livestock and local markets.

STATISTICAL INFORMATION

Division of Animal Industry

Fiscal 1977-78

Bureau of Brucellosis and Tuberculosis

Cattle Tested for Brucellosis	995,274
Percent of Cattle Infected	2.79
Swine Tested for Brucellosis	1,214
Percent of Swine Infected49
Cattle Backtagged at Markets	163,484
Cattle Tested at Slaughtering Establishments	206,425
Percent of Cattle Infected	2.44
Calves Vaccinated	106,010
Cattle Tested for Tuberculosis	57,855
Percent of Cattle Infected	3.29

Bureau of Poultry Services

Disposal Facility Inspections	704
Hatchery Inspections	128
Birds Tested for Pullorum Disease	1,124,486
Birds Tested for M. Gallisepticum	1,159,382
Foreign Exports, Baby Chicks	11,536,611
Foreign Exports, Hatching Eggs, doz.	9,808,231

Equine Disease Control Program

Animals Sprayed and Inspected	58,711
Horses Tested for Equine Infectious Anemia	55,304
Percent of Horses Infected	1.03
Horse Shows Covered	100
Samples Collected	788
Soring Inspections	164
EIA Inspections	7,508

Bureau of Contagious and Infectious Diseases

Cattle Inspected at Livestock Markets	820,373
Swine Inspected at Livestock Markets	385,995
Livestock Inspected on Farms	2,145,431
Garbage Feeders	526
Swine Fed Garbage	40,295

Bureau of Meat Inspection

Animals Slaughtered	178,463
Poultry Slaughtered	7,152,455
Red Meat Products Produced Under Inspection, lbs.	538,393,273
Red Meat Products Condemned, lbs.	3,731,345
Poultry Products Produced Under Inspection, lbs.	201,870,096
Poultry Products Condemned on Antemortem, lbs.	77,589
Poultry Products Condemned on Postmortem, lbs.	859,970
Products Certified, lbs.	3,445,049
Products Rejected for Certification, lbs.	13,059

Bureau of Diagnostic Laboratories

Cases Submitted	51,356
Tests Performed	243,886

Marks and Brands Unit

Theft Complaints Investigated	103
Theft Warrants Secured	37
Brand Certificates Issued	218
Livestock Hauler's Permits Issued	1,157

DIVISION OF CHEMISTRY

Dr. Charles H. Van Middelem, director of the Division of Chemistry since September 1, 1973, was born August 6, 1919 in Bruges, Belgium. He received a bachelor's degree in 1944 and a Ph.D. in biochemistry in 1952 from Cornell University. From 1952 to 1973, he was on the research faculty staff with the Institute of Food and Agricultural Sciences, University of Florida, and was in charge of the Pesticide Research Laboratory in Gainesville.



The Division of Chemistry has the primary responsibility for conducting laboratory analyses and providing technical evaluations on samples submitted by department inspectors and other state agencies to enforce the following six chapters of the Florida Statutes: pesticides; food, drug, and cosmetic; commercial fertilizer; commercial feed; seed certification; and seed. Examples of the type of technical assistance provided by personnel of this division to assure compliance with appropriate state laws are as follows: (1) review food labels, (2) verify seed labels and (3) review pesticide labels prior to acceptance for state registration. The laboratories of this division conduct various chemical, microbiological, and physical analyses in order to test and evaluate a wide variety of products sold in the state for the protection of Florida consumers.

Early in the fiscal year, the division was faced with an unexpected and severe analytical sample load caused by the aflatoxin outbreak in field corn grown in central and north Florida as well as in neighboring states that traditionally ship significant quantities of field corn into Florida for use in animal feeds. The Feed Laboratory was required to utilize a rapid screening analytical technique in order to cope with the large influx of samples from road guard inspectors and other inspectors stationed in the areas of Florida having the highest incidence of aflatoxin in field corn. High pressure liquid chromatographic procedures were developed to analyze corn samples which could not be analyzed due to certain interferences by the rapid screening technique and also commercial mixed feeds containing corn. Later in the year, the aflatoxin incidence in corn used in dairy rations caused problems in some milk from certain dairy farms. At this time the Food Laboratory became heavily involved in analyzing raw milk, eggs, corn meal and other suspected corn products. During a 10-month period of this fiscal year, the division committed an average of seven full-time employees to the analyses of aflatoxins in commercial animal feed and certain food products. In addition, this significant commitment of division personnel had to be supplemented with approximately 5000 hours of OPS-funded personnel, in order to adequately cope with the aflatoxin analytical requirements placed on the Feed and Food Laboratories.

The Division of Chemistry was authorized 107 F.T.E. positions during the year, of which six are assigned to two pesticide residue laboratories located in central and south Florida, plus three inspectors assigned the responsibility of furnishing official samples to these field laboratories. The division is composed of the following bureaus, laboratories, and sections: pesticide residue, fertilizer, feed, seed, food, pesticide, commodity testing, methods development, laboratory services, and administration. Several laboratories obtained some urgently required new instrumentation which significantly increased their analytical versatility and capability. During the year, the division laboratories analyzed approximately 59,000 samples of food, feed, seed, fertilizer, pesticide formulations, pesticide residues, and other commodities. Approximately 330,000 separate determinations, tests, and observations were conducted on these samples.

Pesticide Residue Laboratory

This bureau is responsible for analyzing food and feed products for residues of pesticides, heavy metals and other toxic compounds that may adulterate the product. During this fiscal year 5,794 samples composed of 13,180 determinations were analyzed and approximately 2.0 percent of these were found to be violative.

Inspectors assigned to this bureau obtained 60 percent of the total number of samples analyzed, comprised of fresh vegetables from farms, packinghouses, warehouses, retail outlets and other channels of trade. The remaining 40 percent of the samples analyzed resulted from selective monitoring of animal feeds, beef and poultry meat, milk, eggs, various seafoods, and miscellaneous processed food products.

Increased analyses of foreign imported fresh vegetables were conducted in conjunction with grower interest and pending congressional investigations. Results of bureau samples of citrus pulp and milk were presented to E.P.A. to demonstrate that chlorobenzilate was not present in quantities sufficient to cause either to be adulterated. Additional instruments were obtained to increase analytical capability and progress continues in methods development and quality assurance programs.

Pesticide Laboratory

This bureau operates under the Florida Pesticide Law, which provides protection for the home gardener as well as the commercial user of pesticides. Under this act, every pesticide distributed, sold, or offered for sale in Florida must be registered with the state. The primary responsibility of the laboratory is to analyze all pesticide formulation samples submitted to determine whether the percentages of guaranteed active ingredients are within the tolerance allowed in the pesticide act.

The deficiencies determined on formulation samples analyzed during the four quarters of this fiscal year were 5.64 percent, 5.0 percent, 4.61 percent, and 5.42 percent, respectively. A total of 15,677 determinations were conducted on 6830 samples analyzed. During the year, 10 samples in the AAPCO Check Sample Program and two samples in industry-sponsored AOAC programs were analyzed and reported.

During the year, continued progress has been made in the application of HPLC for the analysis of pesticide formulations which previously had not been successfully analyzed by other methods of analysis, or as an improvement over existing methodology. The percentage of samples analyzed by HPLC in this bureau increased from approximately 7 percent during the first quarter of the fiscal year to approximately 11 percent in the fourth quarter.

Fertilizer Laboratory

This bureau is responsible for the analytical and technical phases of the enforcement of the Florida Commercial Fertilizer Law. Official samples of commercial fertilizers offered for sale in Florida are analyzed for the primary plant nutrients, nitrogen and its components, available phosphoric acid and soluble potash. Secondary plant nutrients such as magnesium, manganese, copper, zinc, iron, boron, chlorine, sulfur etc. are also analyzed when guaranteed. Samples of dolomite and limestone are analyzed to determine if the guarantees are met as to the content of calcium and magnesium and also to determine whether the particle size meets the guarantees on the label. Microscopic examinations of fertilizer samples are made to verify the source materials stated on the label and to detect discrepancies.

A state chemist fertilizer analysis report is mailed to the manufacturer, dealer and consumer involved with each sample. If the laboratory analysis indicates that any ingredient does not fall within tolerances prescribed by the Florida Commercial Fertilizer Law, Chapter 576, a monetary penalty, if any, is assessed. This penalty is paid to the consumer by the manufacturer. A computerized system for handling laboratory data and preparing analysis reports is being utilized and has greatly simplified the quarterly report preparation and compilation of other data.

The fertilizer laboratory checks labels which accompany samples of commercial fertilizers to determine if all guarantees and claims are compatible with the ingredients present. This bureau conducted 107,688 separate determinations on the 9,552 samples analyzed during the year. Deficiencies in one or more plant nutrients were reported on 20.5 percent of the samples.

Feed Laboratory

This laboratory conducts analyses on all types of animal feed sold in Florida, thereby assuring these feeds are in compliance with the provisions of the Florida Commercial Feed Law. The major portion of this laboratory's analytical effort is devoted to cattle, poultry, swine and horse feeds. Determinations conducted on these samples are for moisture, ash, equivalent protein from non-protein nitrogen and total sugars. Analyses are also made from minerals guaranteed on the label such as calcium, phosphorus, salt, iron, copper, cobalt, manganese, magnesium and zinc. Medicated feed additives commonly used in cattle, poultry and swine rations such as coccidiostats, wormers or medications to aid in stimulating growth or improve feed efficiency are also analyzed. The antibiotics, chlortetracycline, oxytetracycline and penicillin, used as additives are determined. A thorough microscopic examination is made on each official sample. Findings are checked against ingredients claimed and any differences are noted and reported.

The Cooperative Forage Testing and Evaluation Program with the IFAS Cooperative Extension Service is well established and summary information is available. Contractual agreement with FDA funding for analyses of medicated feed samples taken in connection with inspectors medicated feed mill inspection was maintained during the year and plans are to continue this program during the next fiscal year.

During the year a major effort was made by the laboratory in the area of aflatoxin analysis. Corn and corn products were examined as well as several other feeding products and mixed feeds. There were 3,856 samples analyzed for the presence of aflatoxin. It is anticipated that this program will be continued until such time as monitoring will no longer be necessary. The laboratory completed a total of 88,590 separate determinations on 11,818 samples.

Methods Development Section

The primary responsibility of this laboratory is to increase the overall analytical capability of this division. During the majority of the fiscal year, this section was totally involved in attempts to improve the qualitative and quantitative analysis of aflatoxins B₁, B₂, G₁, and G₂ in animal feeds containing corn by use of the high pressure liquid chromatographic technique. The Feed Laboratory was required to resort to the use of the Holaday mini-column technique for aflatoxins because of the large volume of samples requiring rapid analyses.

However, serious interferences were manifested on the mini-column when certain mixed feed samples were analyzed by the Feed Laboratory. The Methods Development Section was successful in developing a satisfactory procedure to quantitate the four aflatoxins on many of these "problem" mixed feeds containing corn. During the latter six months of the fiscal year, this section provided essential analytical support to the Feed Laboratory by analyzing for aflatoxins in many of the mixed feed samples that could not be done by the mini-column technique. Investigations are continuing to develop satisfactory procedures for the analyses of certain mixed feeds that could not be satisfactorily quantitated by HPLC during this fiscal year.

Other projects receiving attention were: (1) participated in collaborative study of saccharin, benzoate, sorbate, and caffeine in soft drinks, (2) sugar analysis in honeys (HPLC method developed by this section has been proposed as official first action), (3) finalization of a new HPLC procedure for the analysis of the antioxidants t-BHQ, BHA, and BH in cooking oils, and (4) multi-residue analysis of carbamates on vegetables.

Food Laboratory

The Bureau of Food Laboratories analyzes foods by chemical, bacterial and physical methods to assure a safe and wholesome food supply, to verify the absence of adulterants, to verify compliance with standards of quality and identity and to assure proper representation in nutritional claims and basic labeling. The laboratory is composed of the Food Chemistry, Meat Chemistry, and Microbiology Sections plus an administrative unit which facilitates compliance by reviewing and preparing food labels and providing advice to Florida food processors.

During this fiscal year, a major priority was the prevention of high levels of aflatoxin in human food products. Aflatoxin is an extremely toxic chemical which is produced during the growth of the mold *Aspergillus flavus*. It has been proven to be a carcinogen in animals. A combination of many environmental factors including weather and insect damage led to the production of very high levels of this chemical in southeastern field corn during 1977 growing season. A total of 1430 samples of corn food products including grits, meals, and tortillas; milk and milk products; peanuts and peanut butter; other types of nuts; eggs; and coffee beans from Florida processors were analyzed for the quantity of this fungal toxin. Approximately 6000 analytical hours were expended on this one problem.

Total samples analyzed by all sections of the laboratory during the fiscal year was 11,490. This involved 51,606 individual procedures and revealed 25.69 percent violations. The numbers cited should not be misinterpreted to mean that one in every four items in your grocery cart is violative or adulterated in some manner. The food analytical program is directed toward priorities, potential problems and high risk areas with emphasis also in areas of numerous consumer complaints.

The Food Chemistry Section devoted 67 percent of the analytical time available on two problems in foods: aflatoxins and bakery samples from bakeries with poor sanitation. The remaining time was consumed by gas chromatography analyses for authenticity of oils; high pressure liquid chromatographic analysis of foods for antioxidants BHA, BHT, and TBHQ and preservatives benzoate and sorbate; survey of bottled drinks for saccharin and preservative content; problems with certain fruit juices and decreased numbers of analyses in surveillance of food nutritional claims, artificial colors, fruit and vegetable products and machinery mold content.

The Meat Chemistry Section analyzed meat, poultry and their products from 162 of the over 300 Florida meat processors for protein, moisture, fat, preservatives, nitrates, phosphates, added colors, and extenders such as nonfat dry milk, cereal and soya products. The highest internal temperature of cooking was determined for such products as ham to make certain that trichinae parasites had been killed. Tupelo honey certification, honey compositional analysis, seafood breading, and water phase salt in smoked fish were also performed in this section.

The Microbiology Section analyzed many food products to determine the specific molds present searching for those that produce various toxic mycotoxins, surveyed the soft drink industry in Florida to determine the status of the yeast problem, analyzed highly perishable

sandwiches from Florida processors, and determined the adequacy of processing of low acid canned vegetables and the freedom from bacterial contamination. All foods received were routinely analyzed for total bacterial levels, coliforms, *E. coli*, staphylococci, Salmonella, and yeasts and molds. Disinfectant and sanitizer products were checked for effectiveness of microbiological claims.

Analysts received advanced training in many analytical areas. Instrumental areas of analysis were increased and capabilities elevated. Consumer and media programs on current food topics of interest continued.

Seed Laboratory

This laboratory conducted purity and germination tests to determine the quality of seed offered for sale to Florida consumers on 12,277 samples, requiring 43,152 individual determinations. This total sample load included 5,359 official samples of which 4.78 percent were illegal or had serious violations. All of these seeds were removed from sale in Florida. Of the official samples tested, 12.80 percent were considered mislabeled or had minor violations. These seed were relabeled or were removed from the market.

Approximately 350 samples of rye were "grown out" for trueness to variety and less than one percent of these were found to be incorrectly labeled. As many as 37 other variety tests were conducted on other kinds of seed. Twelve complaints were investigated and arbitration hearings held for seven farmers.

Commodity Testing Laboratory

To insure that quality merchandise is obtained by the state of Florida for use by its agencies and institutions, this section provides a testing support service to the Purchasing Division of the Department of General Services, to the purchasing agents of the county schools and community colleges through the Department of Education, and to the procurement officials of county and municipal governments. The laboratory evaluates the performance of a wide variety of commodities, including laundry and custodial chemicals, paper, paint, office supplies, textiles, office and school room furniture and a host of miscellaneous items, by measuring their compliance with purchase specifications and/or label claims. This information is then used not only as a basis for awarding contracts for these items, but also as evidence for assessing vendor penalties when a manufacturer delivers defective or non-complaint goods purchased from these contracts.

Greater participation in the bidding increased the number of furniture and paper commodities that were examined for the Division of Purchasing this year. A number of structural defects were identified through the stress testing of school room and office chairs, including models which had proved acceptable in previous years' tests. Laboratory data which demonstrated the functional equivalency of a low brightness office paper with that which had previously been used in most state offices, resulted in the establishment of a contract for a natural grade office paper at a 7.5 percent savings over the standard office paper.

The continued surveillance of textile items used in state institutions uncovered numerous instances of specification non-compliance including the construction of mattresses from flammable components; excessive shrinkage, deficient tensile strength, and improper construction of finished garments; widespread misrepresentation of bath and bed linens as first quality merchandise; and fraudulent labeling of garments with respect to such properties as water repellency and fiber content.

The analytical capabilities of this laboratory were expanded in order to determine compliance of carpeting and paints with the recently adopted specifications of the Florida School Plant Management Association. New instrumentation was acquired with which such properties as tuft bind, pile height, and colorfastness to light of carpet, and scrub resistance, sag resistance and vehicle resin type of paint may be determined.

A number of consumer complaints were handled by the laboratory. The most common request was for the lead content of paint or dried paint scrapings. The laboratory staff also continued to act as a referral service for a variety of miscellaneous inquiries and to present

commodity testing topics before such groups as university textile testing classes. During this fiscal year 11,814 individual tests were performed on 1,051 samples, 56.6 percent of which failed to conform completely with the product specifications.

Laboratory Services

The primary duties of this section consist of receiving, preparing and distributing samples to the various laboratories for chemical, microbiological and physical testing. These samples shipped to Tallahassee primarily by official state field inspectors, consist of commercial fertilizers, feeds, seeds, formulated pesticides and various types of foods. Approximately 25,600 samples were processed by this section during the fiscal year.

All fertilizer, feed and pesticide samples received are logged in and assigned an official code number to preserve the identity of each sample throughout the entire investigative procedure. This official number is referred to when necessary by the chemists involved, without prejudice as to the specific manufacturer, dealer or consumer. For the samples requiring extensive preparation prior to laboratory analysis, procedures recommended by the Association of Official Analytical Chemists are carefully followed.

This section also has the responsibility of compiling and organizing the semi-annual divisional orders for all types of chemicals and glassware as well as the proper receiving and dispensing of the supplies necessary for the daily operation of all the laboratories in the division. An inventory is maintained by this section of all surplus chemicals, glassware, and other supplies in the division.

DIVISION OF CONSUMER SERVICES

Jane Wilson Robinson was appointed Director of Consumer Services in August, 1976, by Commissioner of Agriculture Doyle Conner. She served in the Florida House of Representatives from 1970 to 1976 representing Brevard, Osceola, Indian River and Okeechobee Counties. She worked on newspapers from New York to Colorado ending with Washington, D.C. before moving to Florida in 1967.

Mrs. Robinson was born June 22, 1926, in Oklahoma City, Oklahoma. She attended schools in Mexico City, Hawaii, Manila, Philippine Islands and at the University of Oklahoma. She is married to George A. Robinson and they are the parents of four children.



The Division of Consumer Services was created in 1967 by the Florida legislature, who provided the agency with a staff of only two at that time to serve as the state's clearinghouse for consumer complaints. With the recent advent of "consumerism" on the part of state and federal government agencies, as well as an increase in vocal consumers who are seeking assistance and relief, the staff has been expanded to 24 state employees, one OPS employee and two OPS employees who are paid through a federal grant in conjunction with the Department of Health and Rehabilitative Services for our Senior Consumer Information Service.

In the time period covered by this report, the 1978 Legislature funded one additional consumer complaint analyst position. This brings our complaint analyst staff to eight in addition to a consumer complaint analyst supervisor.

This past year focused on our Senior Consumer Information Service grant through the Department of Health and Rehabilitative Services. This grant was a "first-in-the-nation" effort to provide consumer information directly to senior citizens and has been declared an outstanding success, both by the recipients themselves and by state and federal government officials. The program has become a model project for duplication in other states.

As a result of public hearings on Medicare problems held over a year ago, combined with mushrooming complaints from older Floridians, a decision was made to seek funding to produce a newspaper specifically designed to educate the elderly in the areas of consumer awareness and fraud protection.

The newspaper, "The Senior Consumer," began monthly publication in December, 1977, as a result of funding provided through the Florida Department of Health and Rehabilitative Services' Aging and Adult Services' Program Office by the federal Administration on Aging.

The first issue was distributed through the Aging and Adult Services programs. By the time the third monthly issue had been published, the circulation to individuals and organizations who had requested the newspaper had jumped to more than 25,000. Long before the end of the first year of publication, circulation had reached the maximum level allowed by the budget—50,000.

Each month "The Senior Consumer" includes a summary of news important to older Floridians plus information on Medicare and Medicaid, health and nutrition, how to save money, crime prevention, fraud protection, special programs for the elderly, and feature stories about active older persons whose achievements may serve as role models for the readership. Columns on specific topics of interest to senior consumers have been donated by educators, program administrators and governmental officials.

To supplement the information provided in "The Senior Consumer," a 40-page reference book entitled "The Senior Survival Manual" was also produced through the federal Senior Consumer Information Service grant.

"The Senior Survival Manual" includes names, addresses and telephone numbers where help in a wide variety of areas can be obtained. It also includes basic information on credit, crime and fraud, driving, employment, insurance, law, medical matters, health and nutrition, Medicare and Medicaid, nursing homes, how to organize,

saving money and social security. The 100,000 copies of "The Senior Survival Manual" were distributed to the readership of "The Senior Consumer" plus to other individuals and organizations who requested it. The manual was also sent as a reference document to all public libraries in Florida.

Additionally, the division planned and participated in a seminar for the Elders Institute at Florida International University in Miami. For this seminar, the division pulled together other state agencies as well as Dade County consumer officials in a cooperative effort of sharing information.

The Division also participated in a seminar at the University of West Florida, which was set up by the Pensacola Better Business Division. This seminar was put together specifically for the social welfare workers throughout northwest Florida in order to educate them on various consumer complaint subject areas and the way in which this division handles them, so that when these workers receive questions from their clients, they may have answers.

Through a special grant funded to the University of North Florida by the Board of Regents (Service Through Applied Research) the division will soon be assisted in its operation by an on-line computer system. This will be a cooperative effort with 10 to 15 other state and local agencies. We are now in the process of testing the program with a terminal located in our division which is connected to the University of North Florida's computer. We are doing a feasibility study to assure accuracy in the programming while seeking federal funding to implement the complete program in 1979. This computer system will speed not only the actual processing of consumer complaints, but will assist agencies in the answering of daily telephone inquiries seeking information on consumer complaints within the state. It will take approximately one year to become fully operational.

Our Tel-Consumer project, funded through a Title I Higher Education Act grant administered by the Board of Regents to the University of Miami's School of Continuing Studies is underway. The University of Miami will assist in the administration of the Tel-Consumer Project handled by the office of the Dade county consumer advocate and the division. The purpose of Tel-Consumer is to develop a taped telephone consumer information system on 200 consumer-related topics to be placed on audio tapes. This information will be available on a statewide toll-free WATS line, and will be recorded in both Spanish and English.

Upon request by the Staff Development Bureau of the Florida Department of Health and Rehabilitative Services, members of our staff wrote and participated in a 30 minute taped program which covers five areas of consumer issues and problems. The film will be used by HRS employees dealing with Florida consumers to aid in the dissemination of correct information.

Statistics

For this fiscal year, the division received and processed 63,252 pieces of mail. Of the 20,067 complaints handled, 3,050 were referred to other divisions within the department, or to other state agencies. This indicates that 17,017 were handled "in-house." Because the division

does not exercise legal authority over business operating within the state, we must rely on good faith on the part of the business, and determination on the part of the staff to accomplish equitable settlements for the consumer.

The top ten consumer complaints in descending order of frequency for the year 1977-78 were: 1. motor vehicles; 2. dwellings/contractors; 3. mail order; 4. medical; 5. advertising; 6. credit; 7. home furnishings; 8. appliances; 9. electronic equipment; 10. mobile homes.

Education

A major responsibility of the division is to educate Floridians about the rights and responsibilities of consumers in this state. In that regard, the division has developed several ongoing programs including the following:

—Each month the division publishes and distributes "Dollars and Sense," a free general interest consumer newsletter for Floridians. The newsletter includes explanations of federal and state consumer legislation and other informational articles of interest. Currently, over 8,000 people receive the newsletter each month.

—The division publishes and distributes a consumer handbook series of brochures which deal with specific consumer subject areas. Currently, topics in the series are landlord/tenant, advertising, television and stereo repair, complaints, home improvements, insulation, solar energy, credit and automobile repair (in English and Spanish). Approximately 8-10,000 handbooks are mailed or distributed to the public each month.

—Each week the division writes and distributes "On the Consumer's Side," a question/answer consumer column, to approximately 550 newspapers, radio and television stations in the state.

—Division personnel make frequent television and radio appearances to aid in the consumer education of Floridians. Station-originated talk shows and public service programming are used for this purpose.

—Staff members also are frequently guest speakers for high school, civic, and club groups throughout the state. The program and services offered by the division and specific consumer problem areas are usually the program topics.

—The division participates in many state fairs, mall exhibitions and private and public gatherings by setting-up a consumer booth with a staff member available to answer questions and distribute brochures.

—The division utilized outdoor advertising by designing a billboard advertising the toll-free WATS line number. The billboards have been posted throughout the state.

—The toll-free WATS line number is listed in the front cover of many of the state's telephone directories.

—The division has participated in many special projects. Included is the creation and publication of the "Student Survival Manual," a consumer guide for college-age people who plan to live alone for the first time. Also for the HELP STOP CRIME program (through the Office of the Attorney General) the division created and published "The Complete Consumer," a guide to consumer resources in Florida, which is used by HELP STOP CRIME instructors as a teaching aide.

Our division was extremely pleased to receive a teletypewriter machine which enables us to receive, by telephone, typed complaints from deaf consumers throughout Florida. This machine has the

capacity for us to reply to questions by typing them through a sender to the deaf consumer. The calls from the deaf come through our toll-free WATS line at no charge to the consumer.

Legislation Review

The division's power has been greatly enhanced by two acts passed during the 1978 session.

The first, Chapter 78-16 amends the division's statutory authority which permits us to mediate between the consumer and the business by using formal or informal methods. This particular amendment to F.S. Chapter 570, also permits the division to assist in an authorized manner all complaints which are not assigned to other state agencies. The bill would also permit the division to enter into formal mediation with both parties should they agree to such mediation.

The second bill is F.S. Chapter 78-179, the Florida Treated Fence Post Act. This act gives authority to the division to prosecute under the provisions of Florida's "Little FTC Act" any violations of Chapter 501, which the division should find during the course of investigation. It must be recognized that there are presently three parts to Chapter 501: Part I, dealing with miscellaneous consumer problems; Part II, the "Little FTC Act," and Part III, the Antifreeze Act of 1978.

The division was able to assist in passing a revision to the Odometer Act, increasing the penalty for the rolling back of odometers from a misdemeanor to a felony.

The division was also successful in having passed a bill requiring that all retail stores who give no refunds at all, post a sign at the point of sale informing the customer of that fact. The presumption is thereby created that if there is no sign at the point of purchase stating "No refunds shall be given" that the store has a refund policy of some type.

This year, there were several amendments to the Health Studio Services Act, Section 501.012. The act is of extreme importance to the division in that it requires it to receive bonds from those health studio companies who are selling contracts for health studio services, but are not yet in operation or are under construction.

The division has also agreed to provide to all building permit officials throughout the state, a notice to be given persons securing building permits concerning the mechanic's lien law.

Florida Consumer's Council

No discussion of the division would be complete without emphasizing the role of the Florida Consumer's Council in consumer protection. The Legislature created the council in 1967 by the same law that created the Office of Consumer Services. The Commissioner of Agriculture appoints the members and serves as chairman. The council is limited to twenty members. The Statute cites that members are to be "leading members of statewide organizations representing segments of the consumer public so as to establish a broadly based and representative Consumer's Council." Members serve a two-year term with one-half of the membership terms expiring each year.

The council meets at varying intervals, usually three times a year, at the call of its chairman to consider consumer problems and recommend solutions. It assists in promoting consumer education and programs. Since 1967, the council has sponsored or supported major changes in consumer laws.

DIVISION OF DAIRY INDUSTRY

Jay Boosinger, Director of the Division of Dairy Industry, was born in Bradford, Pennsylvania, December 18, 1939. He is a graduate of Manatee County High School, Bradenton, Florida, and a 1961 graduate of the University of Florida, where he received a Bachelor of Science degree in Dairy from the College of Agriculture.

He served as a Dairy Specialist with the Division from 1964 to 1967, prior to his promotion as Assistant Director of the Division, a position he held until his appointment as Director in February, 1976.

Mr. Boosinger is the current Vice-Chairman of the National Conference on Interstate Milk Shipments and has chaired one of the three governing Councils on Interstate Shipments for the past six years. He will act as Secretary-Treasurer for the Dairy Division of the National Association of State Departments of Agriculture for 1978-79. He also has been President of the Southern States Dairy Divisions of the National Association of State Departments of Agriculture, and Past Chairman of the Florida Quality Milk Council.



The Division of Dairy Industry is responsible for the entire dairy program as described in the Florida Milk and Milk Products Law and the Florida Ice Cream and Frozen Desserts Law.

Since statewide reorganization in 1969, the Florida Legislature has given the division added programs to administer, including the Milk and Milk Products Shelf Life Law in 1972, complete jurisdiction over dairy farms in 1974, complete jurisdiction of dairy processors in 1976, as well as state sanitation and survey program. This now leaves the division as the sole agency responsible for the total complex dairy industry.

During the 1977-78 fiscal year the dairy division regulatory activities were rated by the U.S. Public Health Service, Food and Drug Administration, to insure that the quality of Florida milk and milk products sold in interstate commerce met the specifications of the U.S. Public Health Service Pasteurized Milk Ordinance.

The division is comprised of the office of the director and three operating bureaus which function together to insure that only high quality milk, milk products, ice cream and frozen desserts are sold to the consumer.

Office of the Director

The Office of the Director is composed of a director, an assistant director and their secretaries, who furnish administrative direction and support for the Bureau of Dairy Farm Inspection, Bureau of Milk and Milk Products Plant Inspection and the Bureau of Mobile Dairy Laboratory.

Under the direction of the Office of the Director, the Division of Dairy Industry conducts the Interstate Milk Shipment Program. A chemist has been assigned the fulltime responsibility of a laboratory evaluation officer whose primary duty is to promote uniformity and accuracy in the division's and industry's laboratories. Two dairy consultants, certified as Milk Sanitation Rating Officers by the United States Public Health Service, have the responsibility of insuring uniform interpretations of the Pasteurized Milk Ordinance thus enabling dairy products to be shipped in interstate commerce.

Bureau of Dairy Farm Inspection

The Bureau of Dairy Farm Inspection is responsible for all raw milk produced in Florida. This bureau makes sanitary inspections of all dairy farms in Florida as required by law, to see that each farm is operated in a sanitary manner and that the raw milk produced is of the highest quality. This bureau also collects samples to insure that the raw milk meets rigid quality standards.

The bureau issues permits to farms after each farm demonstrates that it can maintain the required high sanitary and quality standards. It approves new construction, new equipment installation and any renovation to existing equipment or facility. It insures that proper milking procedures are followed and insures that each farm observes Florida's rigid animal health regulations.

At the end of Fiscal Year 1977/78, Florida dairy farms numbered 418. The dairy cattle on farms was listed as 198,000. These cattle averaged 9,914 pounds, which was a decrease of 321 pounds per animal from the previous year. Continued high cost of production and the inflationary effect on feed, equipment, fertilizer, and other necessary units of production continue to plague the dairy farmer. The dairy farmer encountered a new problem of aflatoxin in feed, this along with his usual problems with labor made 1977/78 a real challenge.

The bureau made a total of 1,727 official inspections, during which they collected 4,610 official samples. The dairy specialists had 7,326 conferences with their dairymen. This figure can be broken down into four categories as follows: (1) herd health—1123, (2) sanitation—1695, (3) milk quality—1614, and (4) other—2894. There were 363 water samples collected, 165 mastitis quarter samples, 6 supervised milkings, 62 herd checks, 168 investigative samples, 312 vacuum checks, 178 stop sales, 198 hold orders, involving 242,479 gallons of milk of which 53,934 gallons were destroyed, and 30,726 gallons were degraded, and the balance went to Grade A.

Areas of primary concern to the dairymen were brucellosis and aflatoxin. Brucellosis continues to be a serious problem. Three dairies were depopulated under the TB program this year. TB is still an area of concern.

Our honor roll program continued with 39 dairymen receiving an award for quality production.

Bureau of Milk and Milk Products Plant Inspection

The Bureau of Milk and Milk Products Plant Inspection is responsible for the division program relating to all milk and milk products from the time the milk is picked up at the farm, transported to the processing plant, processed, packaged and delivered to the consumer.

The bureau secures samples for laboratory analysis from all plants under its supervision, including out of state shippers, and interprets laboratory results to determine conformance with regulations, or the existence of hazards to public health.

Additionally, this bureau surveys processing or manufacturing facilities and depots for conformance with sanitation and quality laws, so the public can be assured that dairy products sold, or offered for sale, are produced under sanitary conditions and are wholesome and fit for human consumption.

The bureau has the responsibility for conducting a milk hauler program for which three dairy specialists are assigned as milk hauler examiners. Under the milk hauler program, milk hauling services and drivers of milk transports are licensed and regularly inspected. Another function of this program is the inspection of the cleaning of milk transports and the cleaning facilities used.

During the fiscal year, this bureau regulated 38 Florida milk and milk products processing plants and 145 distributors of milk and milk products, as well as 37 ice cream and frozen desserts manufacturing plants. The bureau maintained a sampling surveillance program on

products from 63 out of state milk and milk products plants and 105 ice cream and frozen desserts plants.

This bureau was responsible for collecting 8303 official samples, 1838 shelf life samples and made 3428 inspections of these plants. During the year there were 367 pasteurizer equipment checks, 806 thermometer checks, 90 new construction inspections and 1491 consultations with dairy processors.

The 59 stop sales involved 628,355 pounds of products; of this total 94,015 pounds were released to Grade A products, 168,693 pounds were released to ungraded products, 311,205 pounds were destroyed and 54,442 pounds were returned to the state of origin.

Bureau of Dairy Laboratories

Six laboratories, geographically located near population centers, make up the Bureau of Dairy Laboratories. They perform regular analyses on all milk, milk products and frozen dessert samples submitted by the Dairy Farm and Milk and Milk Products Bureaus' sampling surveillance program. Samples collected at stores by the Division of Inspection are also tested. It is of the utmost importance that this bureau maintain the ability to accurately and uniformly analyze these samples.

Milk is tested for butterfat, solids not fat, added water, bacteria counts, antibiotics, cell count, shelf-life, proper pasteurization, weight, reconstitution and fat adulteration.

The dairy laboratories located at White Springs on I-75 and Pensacola near I-10, in addition to routine testing, sample and analyze raw milk and bulk tankers of pasteurized cream, condensed and blends which are shipped into Florida from other states. During the 1977-78 fiscal year, these laboratories analyzed samples from most of the 2620 transport loads of raw milk and 1074 transport loads of other bulk dairy products imported into Florida. Forty-five loads of raw milk (approximately 2,025,000 pounds) were rejected for failing to meet Florida standards, representing a rejection rate of 1.7 percent. The lower floor of the permanent I-75 laboratory, the construction of which was otherwise completed in 1976, is in the process of being completed with an appropriation of \$19,900 in the 1977-78 budget. The project will provide storage and a waiting room and toilet facilities for milk transport drivers.

Florida is the only state having a milk shelf-life law which requires, by actual laboratory tests, that fluid dairy products be acceptable in flavor at least four days after the pull date placed on the container by the processor. By means of careful temperature controls, frequent milk tasting seminars, and a shelf-life split sample program, a high degree of proficiency and uniformity has been reached in milk flavor evaluations by laboratory personnel.

The Technicon Auto-Analyzer, located in the division's Winter Haven Laboratory, continues to give excellent service for the determination of somatic cell count in all raw milk samples. Determinations by the machine have been accurate and uniform and have resulted in significant laboratory time savings. The same is true of the Milko-Tester for determining fat content. These electronic instruments, located at our Central Laboratory, do the fat and cell testing for all laboratories at a significant saving in cost per test. The Milko-Tester is also used for testing Dairy Herd Improvement Association milk samples for the state of Florida. All split samples utilized to insure uniformity in the laboratory survey program are prepared in the Central Laboratory.

During the 1975-76 fiscal year, the Laboratory Bureau was successful in obtaining a high pressure liquid chromatograph (HPLC) which is located in the Tallahassee laboratory. Our chemists, in cooperation with the manufacturer of this highly technical and complicated instrument, have developed a methodology for analyzing milk for vitamins A and D content. Florida was the first state in the country to have the capability to analyze milk and milk products for vitamins A and D content. The HPLC has the potential for determining all the nutrients which are required by nutrition labeling other than protein and heavy metals. Research will continue toward this end.

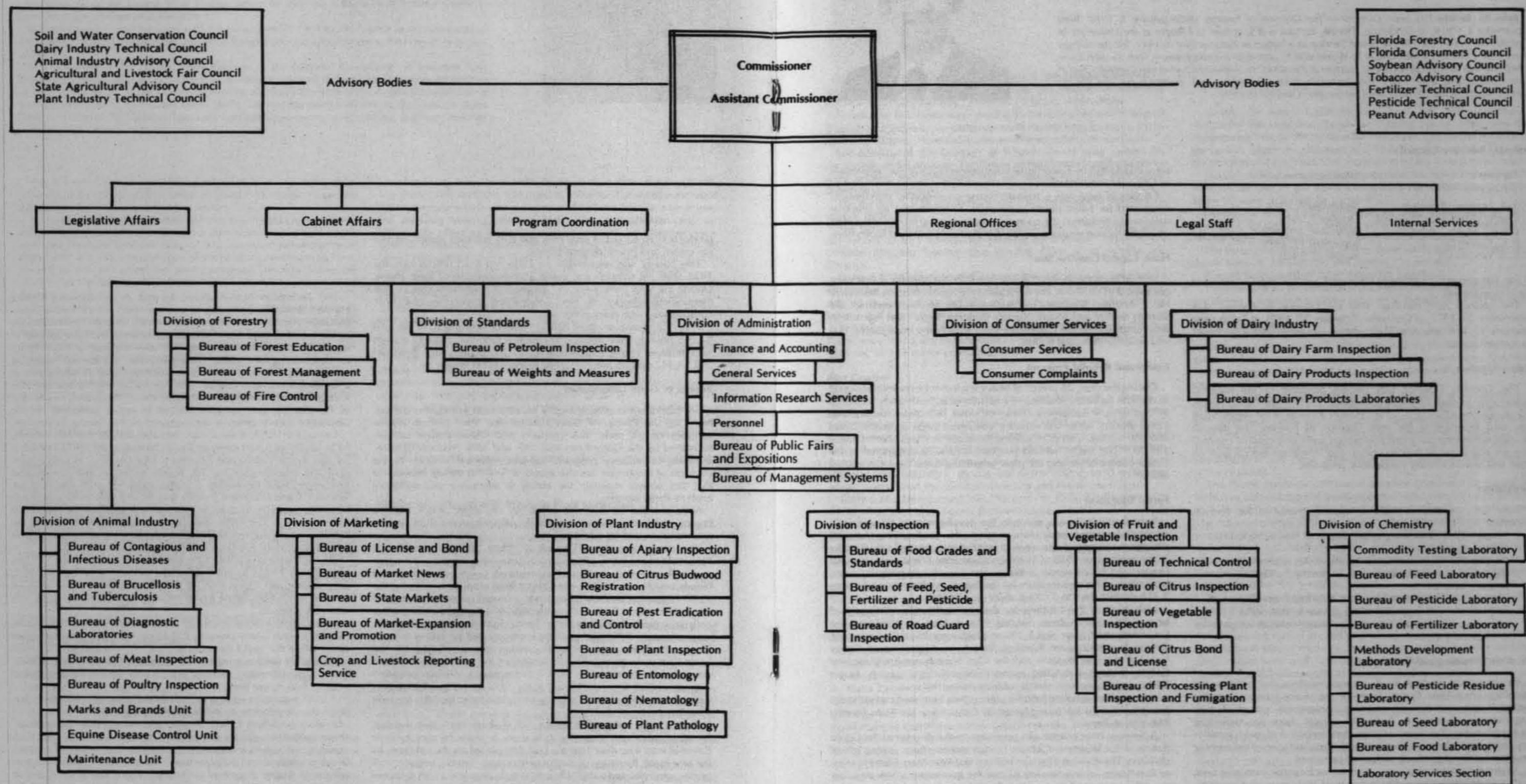
During the fiscal year 1977-78, these six laboratories made 139,985 analyses on 21,539 samples submitted to them, at a cost excluding depreciation and supervision, of \$1.27 per analysis. These analyses resulted in citations being issued on over 4,317,914 pounds of milk and milk products.

According to a recent release by the U.S. Department of Agriculture, that department is now charging \$20.30 per laboratory hour for testing work. When the total Laboratory Bureau 1977-78 budget (\$327,959) is divided by (total personnel (18) × working hours per year (2088)), the cost per laboratory working hour is only \$8.72, as compared to USDA's \$20.30 per hour.

A most significant current action of the Bureau of Laboratories has been the development, publication and distribution of a set of laboratory guidelines to both division and industry dairy laboratories. These guidelines set out in specific language procedures for each analysis and significant support activities to be carried on in Dairy Division laboratories. The objective of the guidelines publication is to achieve a higher degree of uniformity among laboratories and to promote better understanding of the division laboratories' work by those who are affected by analysis results.

Florida Department of Agriculture & Consumer Services

Doyle Conner, Commissioner of Agriculture



Organizational Chart

DIVISION OF FORESTRY

John M. Bethea has been Director of the Division of Forestry since January 1, 1970. Born November 4, 1919, at Sanderson, Florida, he took a B.S. degree in Forestry at the University of Florida. He joined the Florida Forest Service as a ranger in Panama City in 1941, left for military service as a commissioned officer in World War II, and resumed employment with the Service in 1946. He was successively District Forester at Panama City, Assistant Chief of Fire Control, Chief of Fire Control and after 1963, the Associate State Forester, a post in which he was deputy administrator of the Division until he became Director in 1970.



Forestry Advisory Council

Members (fiscal year 1977-78)	Term Expiration
B. T. Longino, President	September 7, 1977
Etter T. Usher, Vice President	October 1, 1978
Philip J. Moses, Secretary	September 27, 1979
P. C. Crapps III	September 17, 1979
L. A. Woodward	August 25, 1980

Mr. Longino will continue to serve until a replacement is named or he is reappointed.

The council held meetings with the Division of Forestry staff November 30, 1977, at Crestview; February 27, 1978, at Tallahassee and June 13, in Brooksville. The members also made several field visits to forestry operations.

Administration

The Division Director was elected president of the National Association of State Foresters in October, 1977, while Florida hosted the association October 7-13 at Orlando. As head of the organization and also representing the state Division of Forestry, the director advised environmental protection groups and Congressional committees on enactment of bills to update and strengthen federal laws on state and private forestry cooperative programs.

Legislation

State laws enacted in 1978 of special interest to the division included:

- Chapter 78-158, relating to prevention of fires along railroad right-of-way
- Chapter 78-323, creating the Sundown Act relating to legislative review of state boards, including the Florida Forestry Council
- Chapter 78-355, authorizing the Game and Fresh Water Fish Commission with approval of the private landowner or managing public agency to regulate motor vehicles on game management areas

Personnel Training and Development

Much use was made of the division's central training facility at the Withlacoochee State Forest. Some of the major training activities included instructor training, practical management, personnel management for supervisors, basic fire control, large fire supervisor training, cooperative forest management technical training, summer environmental education program workshops and specialized training sessions for forest products utilization personnel.

A special training program was carried out for supervisors who work with prison inmates on a day-to-day basis in various work projects. Approximately 75 division employees attended the sessions, which

were conducted by correctional training specialists of the Department of Offender Rehabilitation.

Of special note was a training course on personnel management conducted for forest ranger supervisors. Concentrating on practical solutions to problems, the course was considered to be one of the most effective training sessions held for the division's principal supervisors.

Fixed Capital Construction

Several building projects carried over from the prior fiscal year were completed in 1977-78. These included the Herren Nursery Residence No. 2, Andrews Seedling Cold Storage facility, Munson Seedling Cold Storage facility and Miami Nursery Building. Repair and renovation was completed on the Blackwater River State Forest headquarters that was severely damaged by fire.

Equipment Rebuild Program

During the year, 28 pieces of heavy equipment were reconditioned in division facilities, resulting in a savings of approximately \$436,000 in cost of new equipment. These included 15 crawler tractors, two motor graders, all-terrain vehicles, one boom truck, seven fire plows and one harrow. Cost of rebuilding the equipment was approximately \$95,000. The tractor rebuild program is now headquartered at the Ocala district office and the plow rebuilding at the Lake City district office.

Forest Education

Bureau emphasis was given to the development of the division's residential summer education programs for youths. Environmental education sessions of one week in length were operated for 10 weeks in the summer of 1978 at Withlacoochee State Forest Environmental Center, and for six weeks at Blackwater River Environmental Center. Utilization of the two facilities for residential teaching increased from 3,318 student days to 5,075 student days in 1978.

Utilization of the facilities for day-use students, as distinguished from residential students, totaled 900 students at Withlacoochee Environmental Center and 1,700 at Blackwater River Environmental Center. In addition, the Pine Log State Forest Environmental Center had 278 day-use students and the Cary State Forest Environmental Center, through a standing arrangement with local schools, taught 3,332 students environmental subjects during the year.

A Moon Tree seedling loblolly pine, grown from seed carried to the moon by Apollo XIV was planted by District 5 at the State Forestry Museum at Perry.

A Smokey Bear plaque was presented by the director to the Cocoa Beach Junior Women's Club for fire prevention efforts among school children. The division also was notified that Rep. Mary Ellen Hawkins of Fort Myers won a Smokey plaque for sponsoring a new state law providing a procedure to prescribe burn land owned by absentee owners.

In cooperation with Forest Management, the bureau supervised a special urban printing project to develop and publish informational publications related to trees, especially those in urban areas.

Seven new brochures were produced, including the first bi-lingual (English and Spanish) pamphlets on south Florida trees for use by Latin-speaking citizens. Nine publications were updated and reprinted.

Six editions of the Division of Forestry News were printed for employees of the division. Two issues of the Florida Forestry Reporter were printed and distributed and the normal quarterly publication schedule was resumed.

The division's 50th anniversary was commemorated in April with a special publication.

The bureau supplied Arbor Day program kits and 50 seedling pines per school to 623 schools for planting ceremonies. About 6,500 children attended Smokey Bear Reading Clubs at 34 schools and libraries.

Some 4,000 forestry-related articles appeared in public news media during the year. Forty-one news releases were written during the year, and 25 feature articles entitled "Wood Words" were produced for county and urban foresters.

The forestry field days held in conjunction with the Florida Forestry Association had a marked increase in participation. More than 1,100 students, in 139 teams competed.

Fire Control

The fiscal year began with the worst fire season in a decade in progress. Most of the state was in a drought and crews were committed on a day and night basis to a 2,400-acre fire in San Pedro Bay. In the fall, rain eased the situation but ground water remained below normal and preparations were made for another bad fire season. But the rains continued through the winter, and spring and summer showers were abundant. By the end of the year, ground water was above normal and the swamps were wet and fire-resistant again.

Only 6,860 fires burned 104,595 acres in 1977-78, in contrast to 11,301 fires on 210,011 acres the previous year. But the 1977-78 fires were often in inaccessible swamps and required much greater effort to control than did those of the prior year. As a result of the experience, additional mop-up fire units were constructed to work in swamps, a new fire manual was written, large-fire fiscal procedures were clarified, air tanker support equipment was modernized and a fire-team cadre of 30 fire management specialists was formed and trained for control of very large fires in the future.

Florida was one of the five states asked by the U.S. Forest Service to participate in a test of remote automatic weather stations. One of the automatic stations was placed in the Tallahassee district office for a three-month comparison of its readings with those of the district Fire Danger Weather Station.

Florida received \$72,100 for its third year of a pilot federal program in Rural Community Fire Protection (RCFP). Three training applications were approved, to send local fire department employees for training, and 80 applications were approved for such fire fighting equipment as communications systems, pumps, breathing apparatus, hose and nozzles. Of special interest is the RCFP Fire Truck Manufacturing project. Using excess federal and DOF trucks, the division and the Department of Offender Rehabilitation produces fire trucks ready for use to be leased at cost to rural fire departments. Nine such trucks, in two sizes, have been completed and 33 others are projected for the current fiscal year.

During the year, 1,258 firemen from 147 fire departments completed the eight-hour brush fire training course. Many city fire departments look to the division for instructors. During the fiscal year, the bureau began development of a 12-hour course in wild land fire control that will have national application by the federal government.

Through federal excess property programs, the bureau obtained 131 vehicles for use in the Rural Community Fire Protection program. Some 30 were acquired for parts only.

During the year, 5,914 law violations were investigated by DOF personnel. Of these, 340 persons were required to pay penalties of several kinds. In addition, 824 written warnings were issued.

The three principal causes of fires were: incendiarism, 27 percent; debris burning, 18 percent; and lighting, 16 percent.

Aircraft flew a total of 2,747 hours on patrol.

The year saw 31 preventable and 23 non-preventable motor vehicle accidents. A continuous safety program is carried on by the division.

Forest Management

During the fiscal year, 17,108 assists with forest management were given to landowners, wood users and local governments. Division foresters prepared 490 forest management plans and provided technical assistance in reforestation to 758 landowners.

They aided local governments with 450 assists in comprehensive planning, developed 112 environmental impact studies, prepared 162 tree protection plans and ordinances, rendered technical assistance with tree nurseries to 61 city and county governments, made 12 tree canopy analyses, 28 vegetation inventories and carried out 120 beautification and noise abatement studies, plus numerous similar types of assists.

The Forest Products Utilization program continued to expand its technical and managerial assistance. Aid was given to 1,679 persons in such fields as sawmilling, harvesting and secondary use of wood. The national energy shortage brought more intense efforts to classify, use and find markets for forest product residues.

Additional information on the forest economy in Florida was developed to assist wood-using industries and people, and governmental planners. Statewide, 1,621 firms reported 37,613 employees and a payroll of \$419 million a year.

A sawmill was installed at the Withlacoochee State Forest to aid in training DOF and industry personnel in proper techniques and procedures. A training manual also was developed.

Studies were started at eight sawmills to improve air drying practices and increase lumber recovery. Present losses due to improper stacking, sticker alignment and yard layout amounted to an estimated 1.5 million board feet annually at the eight studied sawmills.

A study was completed estimating the worth of wood residue being lost to landfill sites in Florida, and the recovery potential of the wood. Field personnel are developing an urban wood use program based on the study's recommendations.

Funds released for the Forestry Incentives Program (FIP) totaled \$720,000, and accomplishments rose sharply from the prior year. Some 11,000 acres of trees were planted by 337 landowners, almost a 100 percent increase over the previous year. A total of 200 management plans were written during the year, covering 50,521 acres, and 25 management plans were unplanted on 2,500 acres.

Other highlights of the Resource Conservation and Development (RC&D) program included:

—16 management plans for 845 acres for the Agriculture Conservation Program

—Acceleration of the Suwannee RC&D project with management plans prepared on 1,529 acres and one range management plan developed on 4,500 acres. An agreement was developed with a large landowner for a range grazing trial to be carried out.

—In the west Florida RC&D area, three beaver control demonstrations were carried out at the request of local citizens. Another notable project was the revegetation of borrow pits within the 13-county area. Through cooperation with private industry, seedlings were obtained at no cost and were planted by boy scouts in two of the borrow pits.

Pitch canker was still active among pine diseases, especially in east-central Florida, but not apparently as serious as in earlier years. Infection rates appear to be increasing in northwest Florida.

The position of forest pathologist was established and filled during the year, with headquarters in Gainesville. Priority projects for the office include an effort to evaluate and upgrade seedling quality with special emphasis on DOF nurseries at Chiefland and Munson, evaluation of blight on container-grown Eucalyptus at the DOF nursery at Lake Placid, and investigation of continuing mortality of sand pine seedlings at Munson.

In resource planning, two major activities were undertaken. First, maps indicating potential values for timber, forage and wildlife on forestlands were completed for use in assisting local governments determine their forestry potential. Second, the bureau is developing a model state forest plan to serve as a guide for its own forest resource planning and for other state forestry agencies.

Totals of 47,382,970 bare root seedlings and 181,371 potted stock were sold or shipped during the year. Orders for containerized Eucalyptus seedlings increased slightly to 1,107,000. Due to poor germination, only 908,345 of these requested trees could be supplied.

A Nursery and Reforestation Committee was formed to advise the Commissioner and the Division Director on nursery and reforestation program matters.

Distribution of potted Malayan Dwarf Coconut trees, resistant to lethal yellowing, began during the fiscal year from the Miami Coconut Seed Orchard. All cities and counties have been receptive to this program. More than 6,000 resistant palms have been distributed to cities, based on the 1975 population levels, to replace palms killed by lethal yellowing. Plans are made to produce the Maypan coconut, a hardier tree also resistant to lethal yellowing.

Two improved Slash Pine seed orchards produced more than 6,000 pounds of seed enough to grow 20 million seedlings. Since the improved Slash Pine grows 10 percent or more faster than regular slash, the production of these 20 million improved Slash Pine seedlings represents a significant step in the tree improvement program.

The Talquin Lands tract consisting of more than 13,000 acres, was added to the state forest system during the year through a lease agreement with the Department of Natural Resources. Reforestation and management began on 1,000 acres of cutover land, with 305,000 pines hand planted, 3,500 acres prescribed burned and 20 miles of access roads built.

Activities on the four state forests, Pine Log, Blackwater, Cary and Withlacoochee, included these highlights:

—Recreational use of Pine Log rose with completion of the environmental center and camping area; approximately 1,000 day-use visits were recorded at recreation areas; about 300 overnight campers used the facilities, many boaters and fishermen made daily use of launching ramps on creeks and ponds; and wildlife was encouraged through management of food plantings.

—Slash pines were planted on 90 acres of Cary State Forest; use of the Environmental Center included 200 classes with 3,000 children, plus 38 classes of other groups involving 444 people.

—Financial receipts from several activities highlight the Blackwater River program. Some 33,000 cords of pulpwood and 16 million board feed of timber was sold for receipts totaling \$2.6 million. Receipts from stumpwood, oil and gas revenue, grazing, timber salvage and recreation fees raised this total to \$3 million. More than 211,000 recreation visits were recorded, with 60,837 overnight visits. Seven quail field trails and two fox hunts were hosted.

—Activities at Withlacoochee centered on an extensive recreation program. There were 217,000 day use visits, 44,000 overnight paid visits and 86,000 non-paid visits. The Tillis Hill Quail Management and Recreation Area was developed. Timber receipts totaled \$364,800, while revenue from all activities was \$558,404.

DIVISION OF FRUIT AND VEGETABLE INSPECTION

Herbert M. Riley was born April 5, 1904 in Butler, Georgia. He was graduated from Gordon College in 1923 and employed by the Federal-State Inspection Service of the department in 1927. He remained in that capacity until July 1, 1939, when he received Federal Civil Service appointment. He became supervisor of Florida in charge of inspection of fruits, vegetables, and nuts for grade, quality, and condition under a cooperative agreement between the United States Department of Agriculture and the department. He was appointed director of the division November 1, 1963. Mr. Riley has been honored frequently by the agencies he's worked with and the industries he oversees, and in February of 1978, was inducted into the Florida Citrus Hall of Fame.



The Division of Fruit and Vegetable Inspection is responsible for the inspection of all citrus, both fresh and processed, in accordance with the Florida Department of Citrus and regulations of federal marketing committees. The division is also responsible for such inspection of fruits, vegetables, melons, nuts and grain as may be requested, or as may be required under marketing agreements and price support programs.

Inspection of fresh fruit and vegetables is performed by inspectors through cooperative agreements between the Florida Department of Agriculture and Consumer Services and the United States Department of Agriculture. Processed foods inspection is handled through contractual arrangements between the commissioner of agriculture and the United States Department of Agriculture.

In addition to inspecting fruits, vegetables, nuts and grain, this division is also responsible for the fumigation of all grapefruit shipped to Japan.

Detailed report of this division's activities for the 1977-78 fiscal year will be found in its annual report, issued from Winter Haven. This particular report will summarize the highlights only.

Citrus Inspection

This bureau is responsible for inspecting and certifying all citrus fruit to be shipped in fresh form. Certification requires that fruit meet all applicable federal and state standards and state of Florida citrus fruit laws as well as Department of Citrus rules and U.S.D.A. growers administrative committee regulations. This past season approximately 65 million 4/5 bushel boxes of citrus fruit were processed and shipped in fresh form from packing houses throughout the state. Total shipments were up approximately 9 percent from the previous season.

Approximately 1/4 million 1-3/5 bushel boxes of citrus fruit were destroyed or diverted to non-human food resources such as cattle feed, by both cannery and fresh fruit inspectors.

Because citrus inspection is mandatory, all truck passings are checked for proper certificates and loading manifests by the road guard bureau at highways leading out of state and all westbound Suwannee River crossings. The road guard bureau cooperates fully with the citrus bureau in this regard.

Also, in cooperation with the Department of Citrus, the bureau makes regular inspection of all gift fruit shipments and all citrus roadside stands. Although a portion of the cost of this program is underwritten by the Department of Citrus, the responsibility of enforcement is charged to the citrus bureau. A vast improvement in the quality of fruit handled by these sources has taken place since the inception of this program.

The bureau also maintains close cooperation with the division's statistical, personnel and fiscal sections, whose major responsibilities are listed as follows:

1. The fiscal section handles all financial activities of the citrus bureau. Preparation of payrolls, auditing of expense vouchers, purchasing and issuing of supplies to all field personnel were some of the larger activities handled. In addition, the final preparation of the legislative budget and preparation of fee reports for industry fee committees are responsibilities of the fiscal office.

2. The statistical section audited 34,318 fresh, approximately 175,000 manifest certificates and 10,844 cannery certificates, and 443,055 cannery memorandums for billing and statistical purposes for the bureau during 1977-78.

A comprehensive auditing is always executed to obtain a correct billing for each shipper or processor, and a close check is made of fresh certificates to see that the grade and sizes meet current Citrus Administrative Committee regulations and the Florida Citrus Commission rules.

In addition, some of the other forms audited, coded or checked by this section included packinghouse manifests, manifest certificates, inspection preliminary note sheets, canner's report of fresh fruit receipts, fruit destruction and regrade forms, plant board scale certificates and USDA daily inspection reports.

During the past season, the statistical section issued daily, weekly, monthly and annual statistical reports on movement of Florida citrus, in addition to reports on export fruit, diverted fruit, fruit destroyed and fruit shipped out under containers by special Florida Department of Citrus permits. The following utilization table show the tremendous tonnage of citrus fruit involved in these reports during this past season, with detailed information available from the Winter Haven office.

Certified Fresh Fruit Shipments Standard 4/5 Bushel Box Equivalent

	1977-78 Season	1976-77 Season
Grapefruit	34,008,172	30,938,160
Oranges	25,735,246	22,527,020
Tangerines	5,199,413	5,025,240
TOTAL	64,942,831	58,490,420

Cannery Commercial—1-3/5 Bushel Box Equivalent

Grapefruit	33,349,081	35,112,035
Oranges	163,311,804	183,109,329
Tangerines	2,314,603	1,990,007
Other Fruit	514,322	1,045,794
TOTAL	199,489,810	221,257,165

3. The personnel section reports they are hiring fewer inspectors due to the economic situation, but this situation has enabled them to hire better qualified people to fill the positions due to the many applicants applying.

The transitory nature of the inspection service is still causing them to lose good inspectors. However, by maintaining close contact with USDA and with the cooperation of the other states' personnel officers, all personnel needs were met.

The training office is constantly upgrading their inspectors training program for both new and returning inspectors. This training usually takes place before their field assignments begin in the fall. The training

is given the inspectors on an individual basis as well as group instruction, at the Winter Haven office and other selected field points.

Bureau of Processing Plant Inspection and Fumigation

This has the responsibility for the inspection and certification of all fresh citrus for processing and the fumigation and certification of all citrus for export to Japan. The past season more than 4,000 trailer loads of citrus were fumigated at the two fumigation stations located in Winter Haven and Fort Pierce for a total of 4,513,869 4/5 bushel cartons. This was a decrease of approximately 2,400,000 cartons from the past season. This decrease was due primarily to the problem with biphenyl residues in Japan. Fumigation is carried out over a 24-hour period using 20 trained department personnel during the peak periods.

This past season 84 percent of all citrus was inspected and certified by trained field personnel at processing plants statewide. This inspection is made initially for conditions to prevent the processing of unwholesome or decayed fruit, and then for maturity and internal quality. The internal quality analysis is used by processors for blending purposes as well as for determining the value of the load to the grower. This past season some 443,000 load evaluations were made by trained personnel under this bureau. This bureau works closely with the Bureau of Technical Control to assure that the equipment used in the extraction and testing process as well as the sampling system is maintained in a satisfactory condition to assure accuracy as well as uniformity.

Cannery Commercial (1-3/5 Bushel Equivalent)

	1977-78 Season	1976-77 Season
Grapefruit	33,349,081	35,112,035
Oranges	163,311,804	183,109,329
Tangerines	2,314,603	1,990,007
Other Fruit	514,322	1,045,794
TOTAL	199,489,810	221,257,165

An additional responsibility of this bureau is monitoring the staffing of all fresh fruit packing houses and processing plants statewide. Staffing is based on man-hours per box at packing houses and man-hours per load at processing plants. Weekly tabulations are made for each packing house and processing plant showing the order of effectiveness. An annual report listing each packing house and processing plant in order of effectiveness is given to appropriate personnel for each packing house and processing plant. A substantial reduction in personnel has been accomplished by using this system of monitoring.

Bureau of Citrus License and Bond

This bureau is concerned with those sections of the Florida Citrus Code pertaining to citrus fruit dealer's bond requirements, issuance of citrus fruit dealer's licenses, citrus fruit dealer's agent registrations, packing house and cannery registrations and field box mark or brand certificates. A complete listing of all citrus fruit dealers and their agents is compiled several times each season.

Administrative responsibilities include extensive field work in the investigation of purchases or sales of citrus fruit in all forms. Complaints involving citrus fruit are filed with the commissioner of agriculture and handled as provided for in the Citrus Code and other applicable statutes.

The appropriate order, based on sworn testimony, is entered in the matter by the commissioner of agriculture with provision for suspension of license for failing to comply.

All interested parties are served with the order and the file is closed upon compliance.

Bureau of Technical Control

This bureau furnished technical services to the division and to the industry through extensive administrative, laboratory and field duties.

A. Administrative responsibilities included:

- (1) Coordination of fresh fruit testing at processing plants with the finished product inspection.

Citrus Bond and License Report

Total amount of citrus fruit dealer's bonds	\$15,477,750.00
Total amount of registered shippers and/or canners inspection fee guarantee bonds	699,075.00
Total amount of surety bonds posted by dealers advertising as "Bonded Shipper" in accordance with Chapter 57-4, Laws of Florida	151,000.00
Certificates as provided by Department of Citrus, Rule 20-43.05 issued on request to dealers posting performance bonds	144
Licenses issued to "Bond Exempt Dealers"	217
All citrus fruit dealers licenses issued	1614
Manufacturer's licenses issued	12
Citrus packing houses registered	192
Canning and/or concentrate plants registered	61
Registered agents of citrus fruit dealers	959
Complaints disposed of	43
Complaints pending	27
Complaints dismissed	15
Amounts paid to claimants by dealers	111,416.79
Amounts paid to claimants by sureties	39,688.59
Revocation of License proceedings	0
Administrative Hearings — Prehearing Conferences — Final Hearings Held	29
Fines imposed by Commissioner of Agriculture	24
Licenses suspended by Commissioner of Agriculture	10,000.00
Licenses cancelled by Commissioner of Agriculture	2
	14

- (2) Technical consulting and other services to the industry and related agencies.
- (3) Furnishing of comprehensive tabulated weekly data on the internal quality of all fruit received at processing plants.
- (4) Auditing and verification of yield data at processing plants.

B. Laboratory duties included:

- (1) Analysis, approval and licensing of fruit treatment materials.
- (2) Preparation and issuance of field equipment and chemicals to field inspectors for maturity testing and internal quality.
- (3) Enforcement of the arsenic spray program.
- (4) Monitoring of pesticide residues on citrus fruits and in citrus products, including ethylene dibromide residues in export fruit. Major efforts went again into the analysis of fresh fruit samples for fungicide content, with some 750 separate determinations made for pesticides and/or specific fungicides.

C. Field responsibilities during the past season were again extensive in the areas of servicing and maintenance of specialized equipment, and automation of testing procedures and equipment.

- (1) The routine but heavy schedule of servicing and maintenance required a continuing effort in the setting, maintaining and servicing of 115 AMC Model 2700 single-head extractors, principally in the testrooms of packinghouses.
- (2) At the processing plants, a much more intensive program of service and maintenance was necessary because of equipment wearing out. Some 55 FMC Model 091B testroom extractors were constantly checked for uniformity of operation by means of the truck-mounted extractor control unit. The service was expanded to cover much of the sampling and related equipment used for load evaluation purposes, because of the necessity to keep that equipment in operation and the changing to more high-speed unloading at the plants. In March, Mr. Andrew Kinsey, who had designed the samplers, was employed as a consultant to check out each system at each plant, and to make written recommendations for any necessary corrective modifications. In June, the division with concurrence of the citrus processors, entered into a new agreement with FMC Corporation to take over the sizer-feeder attachments, and to modify the testroom extractors in accordance with industry recommendations.
- (3) The mechanization and automation program to increase the accuracy and effectiveness of load evaluation inspection at processing plants, which was pilot-tested at five plants for two seasons became official at those plants this season, and required a tremendous amount of technical supervision. As pointed out in previous reports, each of the testrooms at those five plants was equipped with identical systems for electronic

weighings for juice content, titration for acidity, determination of degrees Brix, with computerized calculations and printout of inspection certificate. In June, the division and the citrus processors approved the leasing of 10 additional systems, and the up-dating of the five presently used. The use of this new equipment, although still on a voluntary basis, will include about 75 percent of the total volume in the next season.

Bureau of Vegetable Inspection

This bureau inspects and certifies approximately 30 different commodities. About 65 percent of total inspections are made under federal marketing agreements, and peanuts are also covered under the federal price support program. Commodities covered under these marketing agreements are peanuts, tomatoes, limes and avocados.

Our voluntary inspection program has been enhanced by agreements with many of our shippers to not only certify government and Canadian shipments, but to perform quality control work on a continuing basis. This enables the shipper to grade and pack his produce under the guidance and supervision of a licensed inspector.

Through cooperation of the Vegetable Bureau and the U.S. Department of Agriculture, Food Safety and Quality Service, inspection and certification of incoming subtropical fruits and vegetables from other producing areas for quality and condition under appropriate U.S. Grade Standards are conducted as requested at major Florida terminal markets. Requests from financially interested parties have increased over the past two years for voluntary inspection and certification.

In addition to regular grain inspections made at three labs located at Tampa, Live Oak and Graceville, we have expanded our services to testing for aflatoxin.

The principal products inspected were as follows:

	Packages	Equiv. Carlots
Tomatoes	25,598,805	20,828
Celery	1,439,959	2,105
Potatoes	1,425,920	2,887
Corn	693,268	920
Cabbage	659,100	1,063
Limes	578,737	885
Avocados	411,277	627
Peanuts:		
Farmers' Stock	70,250	Tons
Shelled Stock	166,523,503	Pounds
In-Shell	4,537,901	Pounds

DIVISION OF INSPECTION

Vincent Giglio joined the department as an inspector in 1953. Following promotions to supervisor and assistant director, he was appointed division director October 1, 1967. A native of Tampa, he was educated in the public schools and received a degree in horticulture in 1949 from the University of Florida after serving in the Army Air Corps from 1943-45. He recently retired from the Air Force Reserve with the rank of Colonel.



The purpose of the division of inspection is the administration and enforcement of the feed, fertilizer, pesticide, seed, certified seed, food and poultry and egg chapters of the Florida statutes. Besides full responsibility under these seven chapters, the division lends vital support to enforcement of the citrus, fruit and vegetable, milk, livestock, plant industry, and weights and measures laws, and in addition provides valuable support to regulatory programs of other state and federal agencies.

The division is structured into three bureaus under the direction of an administrative unit. Each bureau is concerned with enforcement of specific laws and is staffed by inspectors trained as specialists in a given area of enforcement. Each new inspector, frequently a college graduate, receives comprehensive training prior to working independently. His professionalization continues through participation in ongoing training programs, including individual instruction, group conferences, seminars and workshops. Eighty-five percent of the division's 370 employees are field inspectors who are strategically located throughout the state. Each is conferred with statutory authority to enter and inspect premises, secure samples, stop sale or destroy violative products, or seek further administrative action such as penalties or fines and injunctive or other court action. About one-half of these inspectors possess arrest authority.

Nearly one-half of the division's activities are funded from inspection and licensing fees. Approximately 78 percent of its budget goes for salaries; the remaining 22 percent is distributed among expenses, capital outlay and data processing. The Food Grades and Standards Bureau utilizes about 39 percent of the total division budget; the Road Guard Bureau 34 percent; the Feed, Seed, Fertilizer and Pesticide Bureau 24 percent; and the Administrative Unit 3 percent.

The division's activities continue to adapt to current areas of concern of legislature and the people of the state. The applicators' licensing program is now in full operation. The newly enacted "Fence Post Law" will be implemented next January. In addition to the programs associated with Florida statutes, the division has continuing contracts with the federal government in the areas of poultry and eggs, medicated feed mills, pesticide application and food plant inspections.

Bureau of Feed, Seed, Fertilizer and Pesticide

This bureau's operations affect each and every citizen of Florida. The bureau inspects and maintains surveillance of feed, seed, fertilizer and pesticide products and use which are crucial to the production of food and fiber.

Manufacturing and distribution points of feed, seed, fertilizer and pesticide were inspected more than 30,000 times during the fiscal year. There were over 6,000 such manufacturing and distribution points located within the state. Inspectors called on consumers over 12,000 times, on routine calls and responding to complaints and other needs of consumers. The one-on-one contact between the bureau inspector and consumer helped bring "on-the-spot" satisfaction in many cases.

Inspectors routinely weigh feed, seed, fertilizer and pesticide products. Over 100,000 packages were weighed during this period. Approximately 28,700 packages were placed under stop sale for being

short weight. Stop sales are a major tool of the inspector in his routine work. There were nearly one million pounds of seed placed under stop sale for improper labeling or analytical discrepancies. Approximately 90,000 pounds of pesticides and many hundreds of tons of feeds and fertilizers were placed under stop sale for various reasons. The amounts stop-saled were the result of nearly 1,500 individual stop sale orders issued by inspectors.

The feed section was unusually active because of a severe mold infection in the Southeastern corn crop. The mold produces aflatoxin which is extremely toxic to man and animals. Inspectors collected nearly 800 samples for aflatoxin analysis. Field personnel analyzed 120 grain samples at the grain grading laboratory in Live Oak for aflatoxin. Total feed samples amounted to nearly 8,000 samples, an all-time high. Approximately 600 penalties were assessed, including unlabeled lot penalties, for a total of nearly \$27,000 in penalty payments. The great majority of the penalty money went to the consumers of the affected products. Feed tonnage continued above two million tons annually. Field personnel conducted 47 medicated feed mill inspections of Florida plants under contract with FDA. Interest in the use of antibiotics increased after action by FDA and the topic of recycling animal waste as a feed ingredient gained much attention.

Inspectors drew approximately 6,000 seed samples, which represented over 33 million pounds of seed. The total acres under our certified seed inspection program increased to over 22,000 with peanuts as the predominant crop. The certification program insures that high quality seed of superior varieties maintain genetic identity and purity.

The activity of fertilizer inspection work increased considerably. Over 9,000 samples were drawn, representing nearly 150,000 tons of plant food. Deficient samples resulted in penalties of nearly \$380,000. In most cases the consumer received benefit of these monies. The total of mixed fertilizer, materials, lime and dolomite exceeded 3.2 million tons. Approximately 8,000 new fertilizer mixtures were registered, making a total of 76,000 registered products on file.

The pesticide section maintained its pace of the previous year, continuing the Applicators' Certification program in cooperation with the University of Florida. Currently 16,000 private, 1,500 public, and 1,800 commercial applicators have received licenses for the application of restricted pesticides. Nearly 7,000 pesticide samples were drawn by inspectors to insure quality and quantity of the pesticides purchased by consumers. Special Local Need registrations continue to be very active, with 70 issued during the year. Celery, cotton, potato and tomato growers were confronted with insect and disease problems that could not be controlled under existing means. An Emergency Crisis Exemption was issued by Commissioner Conner, authorizing the use of Monitor for the control of leafminers on celery. Additional emergency exemptions were approved for Benlate to control stalk rot on potatoes, Vydate-L for leafminers on tomatoes and Ambush, Bolstar 6, Curacron 6E, Pounce and Pydrin for the control of bollworm-budworm complex on cotton.

Bureau of Food Grades and Standards

The objective of this bureau's activities is dual in purpose. Foremost is protection of the public against food-borne health hazards, and collaterally, prevention of economic loss to the consumer through intentional or inadvertent merchandising deceipts. Enforcement of the food law has been a continuous function of this department for some 70 years.

General activities include inspection of product and facilities at the producer, processor, distributor, retailer, i.e., wherever food products are manufactured, processed, held or offered for sale. In addition, the investigation of consumer complaints regarding food continues to be an important task.

Inspectional facets include ascertaining suitability and sanitation of buildings, grounds, facilities, operations, processes, storage and transportation and personnel. Methods include organoleptic, on-the-site chemical and physical testing, weighing and measuring, drawing samples for laboratory analyses and others. Regulatory enforcement may involve stop sales, stop use, destruction, hearings, revocation of permits, administrative fines, injunctions and other court action.

Aflatoxin adulteration of corn products for human consumption was a major problem due to the effect of adverse weather conditions on the corn crop. The public health was protected by extensive inspection and analysis of grits, meal and other corn products. Adulterated products in sizable quantities were discovered and destroyed.

By an act of the legislature, the responsibility for inspection of shellfish and crab processing plants was transferred from the department to the Department of Natural Resources. At the same time the bureau placed increased emphasis on fresh oyster testing to enforce maximum free liquor requirements in commerce and to the point of final sale. Enforcement of a new rule requiring a terminal sales date on fresh oysters was also initiated.

During the fiscal year the contract with the Federal Food and Drug Administration was continued for the fifth successive year. This joint effort in consumer protection between state and federal forces was expanded to include additional types of food processors for the second consecutive year. It has provided superior results in sanitary and microbiological inspection.

The Federal-State Poultry and Egg Grading Agreement with the United States Department of Agriculture was also continued. Under this program all USDA grading is done by the department. An independent state grading surveillance program is also conducted and in combination the two programs provide excellent quality assurance to the consumer. This year additional effort was continued from retail food inspectors to verify egg grades in retail stores. This program had a high degree of effectiveness. The poultry and egg inspection and grading service has had growth over the past year commensurate to expansion of the poultry and egg industry.

Approximately the same number of inspections (71,000) were made as last year, but additional time and emphasis was placed on egg grading and oyster testing at the retail level. In conjunction with these inspections, approximately 10,000 samples were collected, 6,000 stop sale orders issued, 487 thousand packages weighed, 3.5 million pounds of unfit food destroyed, 184 million dozens of eggs and 282 million pounds of poultry inspected.

Bureau of Road Guard

Almost 45 years ago the Road Guard Bureau, as it is now called, came into existence, with a few tents, flashlights and part-time

employees, to see that no uninspected citrus fruits went beyond the Suwannee and St. Marys Rivers. Since that time, many changes and improvements have occurred, bringing the bureau up to a high level of productivity, efficiency, standards of performance and personal pride exemplified by employees in a comprehensive inspection program. During the interim between 1934 and the present time, progress and changes came about slowly, but during the past decade progress has been more rapid and far-reaching. In 1934 a few thousand boxes of citrus passed these stations; by the past fiscal year this had increased to 56,034,093 bushels of fresh citrus and 109,731,834 gallons of juice and concentrates.

With our radio communication system, marked pursuit vehicles and better qualified and trained personnel, we have uncovered a substantial increase of violations in commodities regulated by other state and federal agencies that we support. The apprehension of aliens coming by our stations, and reporting them to the Jacksonville office for appropriate action has so increased that Congress now has appropriated funds to staff a border patrol headquarters in the Live Oak area. During routine inspections of vehicles for agricultural, horticultural, and livestock products, our inspectors are finding an increased number of vehicles transporting more marijuana than ever before. Last fiscal year, our inspectors found over 63,000 pounds of this contraband, representing more than \$20,000,000 in street value. Such contraband becomes involved in our inspections, not by choice but by the fact that it is discovered during agricultural inspection procedures.

We find and assist in the recovery of stolen vehicles, appliances and various other items. A concerted effort in support of the Department of Revenue has assisted them in collecting sales taxes which would not have been paid otherwise. During the first three months of 1978, over \$17,000 was collected solely as a result of our reports. This does not include additional amounts that the Department of Revenue may collect from audits which they will conduct on these reported violators.

In a move to secure badly needed replacement vehicles, we purchased twelve used cars traded in by the FHP and other agencies to General Services. Due to the poor condition some of these cars were in, considerable additional expenses in repairs were incurred. Our last budget request included 18 pursuit car replacements and strobe lights for all of our vehicles, but we were successful in obtaining funds for only five vehicles. Consequently, aged high-mileage vehicles continue to present problems.

Forty-seven inspectors attended Police Standards Training School during the past year, bringing our total certified personnel to 109. We hope to certify the balance of our 140 inspectors during the current fiscal year. Florida Statute 570.15 was amended again this past session to clarify definitions of vehicles subject to, and those excluded from inspection. Two inspector positions are currently being utilized to assist in livestock and other assignments that require certain specialized training and experience. This has proved advantageous to the operations of the bureau and the activities of our personnel.

We continue to support and assist many state and federal agencies in their regulations of numerous commodities and products. With strategically located inspection facilities along the northern perimeter of peninsular Florida, we are able to provide valuable services to the state's producers and consumers that would otherwise be unavailable.

With close surveillance and inspection of cargo-carrying vehicles, the activities of this bureau are a significant factor in the economy of this state, and its many agricultural and related industries.

DIVISION OF MARKETING

John D. Stiles served in the U.S. Marine Corps during World War II for three years and was employed as director, division of marketing for the West Virginia Department of Agriculture before joining the Florida Department of Agriculture in March of 1962 as chief of the state marketing bureau section of the division of marketing. He became assistant director in 1964 and director in 1966. Born in West Virginia September 5, 1924; he was graduated from the public schools there and received a bachelor's degree in agriculture from West Virginia University in 1950.



Administrative Section

Export marketing activities received strong emphasis during 1976-77. A Florida Food and Agricultural Export Directory was published and widely distributed to those interested in international trade. A 15 minute color film in Spanish was produced for use in promotion of Florida livestock and agribusiness products abroad.

Division personnel participated in the Third Southern United States Trade Association (SUSTA) International Food and Agricultural Trade Show in New Orleans. The Eighth Florida International Agribusiness Trade Show was held in Tampa. This is an annual cooperative project between the division and the Florida International Agricultural Trade Council and is oriented to promoting exports to Latin America and the Caribbean.

Marketing specialists made promotion trips to Europe, the Caribbean, Central and South America. *Trade Leads* was published timely throughout the year and many foreign buyers were given tours of Florida's agricultural industries.

Direct producer to consumer marketing also received added emphasis this year. Our specialists have worked with many communities in an effort to establish new community retail produce markets. We have also given assistance to established markets as they seek to offer a needed service to both the grower and the consumer. We believe that the direct marketing program has a good potential and will continue to receive our support.

Transportation of fresh fruits and vegetables to market has become an area of vital concern. This year we had specialists working with the Florida Agricultural Transportation Task Force, the Florida Fruit and Vegetable Association and the Florida Watermelon Association to help assure adequate transportation at the proper time. Informational material was printed and supplied to truckers throughout the country along with radio and television spots. We also helped organize the First National Agricultural Transportation Conference.

Three active marketing orders were administered by division staff. These include peanut, tobacco and soybean grower assessments which are used for research and promotion activities. Assistance was also provided to other commodity groups interested in developing proposed marketing orders.

We gave assistance to the tobacco industry as we helped coordinate their marketing activity.

We carried out an active Florida-bred Quarter Horse Program certifying and registering approximately 400 horses. Breeders awards and additional purses in this program amounted to \$50,000. This program included "horse of the year" awards and a nationwide promotion program for Florida-bred horses.

Economists developed feasibility studies in the following areas:

Impact of Mexican Vegetable Imports, Cuba's Foreign Trade, Columbia County Watermelon Shed Study, Florida City State Farmers' Market Land Need, Pahokee State Farmers' Market Study, Pompano State Farmers' Market Study and a North Florida Market News Study.

Bureau of Market News

Continuing efforts initiated in 1975, further cooperative agreement adjustments were established with federal counterparts A.M.S., U.S.D.A. during the 1977-78 fiscal year.

The Orlando Fruit and Vegetable Market News office was relocated in the State Office Building at Winter Park. Besides a local headquarters change, this unit acquired new printing equipment and shifted all market reports to second class postage. Additional market coverage was added by providing telephone recorder services for the Ruskin tomato production area. At North Palm Beach, this Fruit and Vegetable office also switched to second class postage for all market reports, substantially reducing costs. The Sanford office was closed in this fiscal year and the market coverage was shifted to the North Palm facility. Seasonal potato coverage will be handled from Palatka rather than from Hastings, and reports will be issued from North Palm Beach. The Federal reporter will be added to the North Palm office staff seasonally, January to June, and will assist in statewide vegetable coverage until spring, when this position moves to Palatka to cover potatoes. The Miami Fruit and Vegetable Market News office also changed over to second class postage following installation of new offset printing equipment. This office added another telephone recorder to cover state Flower and Fern marketing reports to complement services at Fort Myers and provide local information. Miami also switched Federal telephone equipment to the Florida SUNCOM system substantially reducing costs.

The Poultry and Egg section, headquartered in Seffner, continued to maintain basic market news routine services as personnel would permit. Marginal staffing at this facility has been of critical concern during the fiscal year and every effort is being expended to improve conditions. Even so, the office added a recorder to cover Ruskin tomatoes for the Fruit and Vegetable program and started serving as the bureau's liaison in repair and maintenance of telephone recorder instruments.

A reorganization and relocation of the Livestock Market News Program, long awaited, finally materialized and the headquarters office was moved from Tallahassee to Winter Park. This unit started training new office staff and preparing to take over and issue locally market reports for many years issued by Federal from Georgia.

Additional telephone recorder services were established at Fort Pierce and a combined report issued to the Tampa Fruit and Vegetable recorder. Sharing office space and printing equipment with Fruit and Vegetable at the State Office Building in Winter Park, this unit now has the use of teletype wire services, SUNCOM telephone system and issues printed reports under second class permit. Presently awaiting new addressing equipment, the Livestock unit has experienced great change in an attempt to improve overall services and capabilities.

Finally, the Florida Market Bulletin, staffed and prepared in Tallahassee, received the means to initiate a computerized mailing list for the publication. Begun in May, it is expected to be operational by November, 1978, if all goes well. Another surprise was accorded the Bulletin when federal postal authorities granted a special rate

classification to the publication under its prevailing second class permit. The new rate reduced postage costs significantly but additional nationwide postal increases recently announced may offset any gain.

Bureau of License and Bond

During the fiscal year, there were 2,992 licenses issued to bonded dealers in agricultural products. The revenue from license fees paid in support of the licenses amounted to \$64,450.

For the fiscal year, licensed dealers posted with this office surety bonds totaling \$19,041,403. The average amount of bond supporting a bonded dealer's license for the year was \$8,369.

We issued 35 licenses under the Livestock Prompt Collection Law this year which brought in revenue in the amount of \$3,500.

Bureau of State Markets

This bureau's primary purpose is to assist the marketing of agricultural products. This function is carried out by providing aggressive leadership, facilities and information necessary to move agricultural products from farm to the consumer in a systematic and efficient manner at a reasonable price for the producer and consumer.

Several new packing houses and additions were made to our market system during the year. Considerable renovations and new additions were completed in the effort of upgrading our markets. Several tenants on the markets installed new equipment and machinery improving their ability to handle more produce.

The major additions and improvements to our market facilities during 1977-78 include:

1. Cooler rooms in Florida City.
2. New Packing House at Plant City.
3. Added overhang to consumer market at Fort Myers.
4. New Packing House at Gadsden County.
5. Cooler rooms at Pompano.
6. Installed new sewer system at Florida City.
7. Extensive renovations and upgrading facilities at various markets were accomplished for an approximate cost of \$83,000.00. Almost \$696,000 from our Construction Revolving Fund was spent on new projects at markets as outlined above.

The state markets received the most challenging year in marketing fruits and vegetables through their various markets. The following is a comparison of units through all 15 state farmers' markets.

**COMPARISON TABLE
PRODUCE MARKETS**

	1976-77	1977-78
Unit (bushels) sold through State Markets	20,094,895	17,483,230
Value of Produce sold through State Markets	\$130,553,166	\$134,267,029

LIVESTOCK MARKETS

Number of Cattle sold through State Markets	65,230 hd.	56,530 hd.
Value of Cattle sold through State Markets	\$7,762,516	\$11,250,368
Number of Hogs sold through State Markets	5,138 hd.	5,555 hd.
Value of Hogs sold through State Markets	344,040	433,757
Number of Miscellaneous sold through State Market	576 hd.	550 hd.
Value of Miscellaneous sold through State Markets	5,919	6,124
Total Value of Products sold through State Markets	\$138,665,641	\$145,957,278

The above indicates the severity of the cold weather experienced in January; the salvage of what could be made of some of our products that were still growing, the re-planting and marketing of the various products within the state.

This has been a most challenging year to our farmers as well as our farmers' markets.

The community retail markets have shown a continued interest on our state farmers' markets. Progress has been shown at Plant City, Florida City, Fort Myers, Sanford and Gadsden County. These markets have been designed to assist our small farmers and consumers who are on a fixed income and are needing assistance at this time.

The bureau has put all efforts to develop modern marketing practices on each of our state farmers' markets so as to improve the efficiency in the handling and transportation of our agricultural products. Close cooperation was maintained with producer, commodity groups and other agencies in standardizing, where possible, package and container sizes to meet the requirements and desires of the supermarket organizations.

During the year our four field employees made 1281 contacts with dealers in agricultural products who were unlicensed for the purpose of investigating and determining whether or not these unlicensed dealers were operating in any manner where compliance with the License and Bond Statute would be required. Additionally, there were 2955 contacts made in an effort to develop information as to the status of dealers transacting business in the state involving the various commodities covered under the License and Bond Statute. Finally, there were 2105 personal contacts made in an effort to obtain license fees, application for licenses, and surety bonds involving those dealers known to be transacting business under the authority of this Statute.

Field personnel made 468 contacts involving the investigation of claims during the fiscal year. As of July 1, 1977, we had 72 claims pending with a total monetary value of \$562,841. During the fiscal year we received 107 additional claims involving monies totaling \$614,238 and, finally, had pending as open files as of July 1, 1978, 75 claims totaling \$567,685. During the fiscal year, the surety companies involved paid claims totaling \$150,236. At the same time, subsequent to administrative action, bonded dealers paid claims without recourse to their bonds in a total amount of \$85,121. In addition to the above, unlicensed and unbonded dealers settled claims totaling \$2,010. In summary, through our license and bond activities, there was \$237,368 recovered either from dealers or their sureties for the benefit of the Florida producers.

During the last year, we participated in an inquiry to determine if there was a need for a bonded grain warehouse law in Florida. No final report has been issued but it seems that there is not sufficient need for such protection to warrant the expense and additional regulation that would be associated with such a law.

Bureau of Market Expansion and Promotion

During the fiscal year, the bureau was involved in a wide variety of promotional and marketing programs.

Bureau personnel appeared on several television and radio talk shows throughout the state and discussed various aspects of Florida agriculture.

Bureau home economists appeared regularly on various television stations throughout the state for a total of 89 appearances. Recipes and information on Florida agriculture products were demonstrated and discussed.

During the year, Harvest Festival dinners were held in New York, Baltimore, Chicago, and St. Louis. Various bureau and chain store personnel, along with Commissioner Conner, attended these functions.

A wide variety of recipe brochures and pamphlets were printed and distributed throughout the year. These included a Basic Foods for Schools, Microwave Cooking, Magic Land of Vegetables, Electric Skillet Cooking, Wok Cookery, Indoor Plant Care, Tupelo Honey, Florida's Latin Favorites, and Freezing & Canning. Other menus and recipes were prepared for the Forestry training camps, chicken cooking contest, television food demonstrations, food editor releases, Mini Menu films and various publications.

The bureau's art department prepared a number of art layouts, including those mentioned above, as well as the Market Bulletin and

Export Directory. The art department also supervised the construction of various exhibits and displays which included the FIATC, Hollywood Mall Promotion, Annual Conference, and Legislative Appreciation Day. The art department also prepared art work for the division's P.O.S. material and other work submitted by other divisions.

Bureau personnel attended many meetings and worked with various state and national organizations. These included the FSU home economics classes, Nutrition Club, Florida Beef Council, Florida and National Watermelon Associations, FIATC, Florida Foliage Association, FFVA, USDA, Florida Peanut Producers Association, Tampa Port, Plant City Strawberry Festival Committee, Florida Poultry Federation, Farm City Week, IFAS, Florida Tomato Committee, Florida Nurserymen and Growers Association, Florida Restaurant Association, Florida Federation of Women's Clubs, Florida Cattlemen's Association, Florida State Fair, Florida Celery Exchange, Florida Sweet Corn Exchange, South Florida Vegetable Exchange, Florida Lime and Avocado Committees and many others.

The bureau played the key role in several projects carried out during the year. Among these was the Florida Foods Rally chain store promotions consisting of some 6,000 chain stores represented in 30 states. This promotion consisted of such chains as Publix, Colonial, Piggly Wiggly, Alterman's, Harris Teeter, Bruno's, Winn-Dixie, Albertson's, Richfoods, Giant Eagle, Allied, Chathams, Fazio's, Certified, and some 12 others. The bureau was also instrumental in carrying out "All Florida" promotions in some 1,900 A&P Stores located throughout the country. Three more Mini Menu films were contracted by the department. These consisted of films on sweet corn, squash and avocados. The bureau also directed the filming of two additional Mini Menu films, one for the Florida Foliage Industry, and one for the Florida Peanut Industry. As a result of these films being aired, the bureau answered some 1,963 written requests for Mini Menu recipes.

Through bureau personnel efforts, a Whirlpool microwave oven was obtained, free of charge, for use in the division's test kitchen.

The bureau also instituted a special P.O.S. survey for chain stores on material utilized. This survey was sent to 144 chain stores. The bureau also assisted "Market News" in a survey on the utilization of the Florida Fresh Fruit and Vegetable Report.

This year, bureau merchandisers made merchandising calls in the midwest to cities including Kansas City, Minneapolis-St. Paul, Cleveland and Detroit, with an additional call to Houston. These were in addition to regular calls in the Northeast and Southeast.

Bureau personnel assisted in the planning and production of a new 15-minute FIATC export film. The bureau also prepared articles for publication for the Rural Electric, Air Florida, Southern Living, Progressive Farmer, and Key magazines.

Bureau personnel also assembled, tested and prepared information and recipes for low sodium diets, home economics slide programs, agriculture education programs for schools, revised school slide program and supervised this year's Farm City Week photo contest and the Farm City Week program.

In January, the bureau planned, coordinated and supervised another Florida Agriculture Mall Promotion which was held at the Hollywood Fashion Square in Hollywood, Florida. A kick-off breakfast was held which was hosted by Commissioner Conner and attended by eight Representatives and Senators, along with numerous Florida agriculture representatives.

The bureau also provided assistance to various commodity groups in designing, planning, and printing of special P.O.S. and promotional material. Among these were the Florida Watermelon Association, National Watermelon Association, and the Florida Peanut Producers Association.

The bureau also assisted or participated in various other activities relating to department and division functions. Among these were assisting in purging of the Market Bulletin mailing list, Legislative Trail Ride, Legislative Appreciation Day, relocation of photo file and presentation of plaques for Publix, Tallahassee personnel.

The bureau also continued preparation and distribution on a monthly basis of "Clips & Tips," and the bi-monthly preparation and distribution of "FEEDBACK" for institutional use in the state. The radio releases

"Tips to the Homemaker" were distributed to 84 Florida radio stations, bi-monthly. These releases provided information and availability on Florida agricultural products.

Bureau personnel also assisted in the activities of the National Chicken Cooking Contest which was held in Jackson, Mississippi, as well as attending chain store openings in New York and Florida, and provided P.O.S. material for these functions.

Florida Crop and Livestock Reporting Service

The Crop and Livestock Reporting Service survey system was presented with unusual opportunities to perform in fiscal 1977-78 as cattle numbers dropped sharply, and uncertainties such as frosts and short carrying supplies of concentrated orange juice demanded unusual forecasting accuracy. These challenges were successfully met to further confirm the effectiveness of these surveys, forecasts and estimates.

Administration — The joint administration of the Florida Department of Agriculture and the U.S. Department of Agriculture statistical programs provided economical and efficient operations without duplication of activities of information requests from farm operators. Requests for information were answered fully and promptly.

Livestock Market Information — The "Florida Livestock Roundup" was published monthly as a cooperative endeavor of the Division of Marketing, Food and Resource Economics Department of the University of Florida, Florida Cattlemen's Association and USDA. A variety of marketing information was included in this release. The University contributed economic outlook information. The FCA endorsed the publication by reproducing and mailing the "Roundup" to its entire membership of about 7,000.

The annual publication "Florida Livestock Statistics, Livestock Summary" was continued as a compilation of the major livestock data available to reflect the position and trend of Florida's livestock industry with other states and the U.S.

Citrus Crop Forecast — The 1977-78 first citrus forecast was made in October. Cold damage surveys were made during cold mornings so information could be supplied to the Florida Citrus Commission for their action to embargo fresh shipments. No damage was found to require an embargo. The October forecast for oranges was 164.0 million boxes; actual harvest was 167.8 million boxes. Other varieties were forecast with equal accuracy.

Citrus-Pounds Solids — The 1977-78 FCOJ forecast converted to total gallons was within acceptable tolerance. However, the boxes of fruit were slightly more than projected with the yield per box being slightly less than projected.

Citrus-Research Program — A special survey on all oranges collected was made to relate weight and volume. Each individual orange was weighed and then measured to determine volume. This volume to weight is being studied to see if a further improvement can be made in citrus forecasts.

Citrus-Prices Received — Citrus prices were collected and published on a monthly basis during the 1977-78 season. At the end of harvest, a weighted season average price was published based on utilization data. Data was collected and utilized to revise the 1976-77 monthly and season average prices to include fruit marketed cooperatively and in participation plans.

Citrus-Summary — In cooperation with the Market News Service, the "Citrus Summary" and "Marketing Florida Citrus" was again published. These provided major statistical series under one cover for mailing to a single unduplicated mailing list.

DIVISION OF PLANT INDUSTRY

Halwin L. Jones was employed in 1949 as an inspector with the State Plant Board, which was to become the Division of Plant Industry in 1961 under government reorganization. He was assistant plant commissioner and assistant director from 1951 until November, 1964, when he became director. Mr. Jones was born March 7, 1924, in Crescent City, Florida, and was graduated from the University of Florida in 1949 with a bachelor's degree in agriculture and in 1952 with a master's degree in agriculture.



The Division of Plant Industry serves Florida's agricultural and horticultural industries by providing protection against potential serious plant pests.

Duties include the inspection and certification of all nurseries and stock dealers throughout the state, non-nursery certification, and other special certification programs and regulatory duties, including survey and detection.

Agricultural products specialists, plant pest technicians, and apriary inspectors stationed throughout the state work together to accomplish these tasks. Field personnel are supported by administrative, scientific and technical personnel located in Gainesville—headquarters for the agency, Winter Haven and Miami.

Bureau of Plant Inspection

The total number of active nurseries reported under inspection for the 1977-78 fiscal year was 6,377 compared to 8,531 reported last year. This would appear to be a drastic decrease in the number of nurseries compared to last year's report. However, with the aid of a new computer system a more accurate method of reporting is now available. In the past, if a nursery was registered in one county, the block was reported as a nursery in that county. Under the new method only own-use and fee-paying nurseries are reported. Blocks of nurseries are being reported separately for the first time. If calculated as in previous reports, the total would show 9,498 nurseries, or an increase of 967 nurseries.

During the 1977-78 fiscal year 1,196 new nurseries were registered; a decrease of 748 from last year's record of 1,944 new registrations. During the same period 1,500 nurseries were marked out of business. A total of 16,409 inspections was made of the 8,377 reported nurseries this fiscal year for an average of 1.96 inspections per nursery. This compares with 21,469 inspections made of 8,531 nurseries reported in fiscal year 1976-77.

A total of 5,600 inspections of 5,762 nursery stock dealer establishments was reported for this fiscal year. This compares with 6,324 inspections of 6,805 nursery stock dealer establishments last year, a decrease of 562 inspections and a decrease of 1,043 nursery stock dealer establishments. The average number of inspections for stock dealer establishments was 0.97.

Export certification work resulted in 9,220 state phytosanitary certificates being issued for 68,250,047 items. Federal certificates issued totaled 431 for 888,013 items.

Bureau of Pest Eradication and Control

The citrus blackfly program, still the division's biggest eradication effort, is proceeding on schedule. State and federal officials reached the conclusion early in the program that Florida cannot afford to live with this pest, and that it should be eradicated.

The main spray program in Palm Beach County has been completed, and spray crews are now working in Broward County, from north to south. Crews are proceeding south at the rate of one mile every 21 days. Due to the increased density of the homes and hosts to be sprayed, it was necessary to contract for extra equipment. Twelve extra

hydraulic units went into operation in June, plus eight additional mist blowers. This brings the total spray units in operation to 47 hydraulic units and 18 mist blowers. Division personnel are constantly surveying in back of the spray operations and have detected seven small single door-yard-type infestations in Palm Beach County, and are now spraying a 2- to 3-block radius around this area. This is called a "mopping up" operation. In any eradication program, it is necessary to thoroughly survey back of all control operations to detect any skips or reinfestations as soon as possible so they can be quickly eradicated.

During the past year, isolated infestations of citrus blackfly have been found for the first time in Okeechobee City, Port St. Lucie, and Fort Pierce. All of these infestations have been or are in the process of being treated.

Intensification of survey operations is credited with the new finds. Because of the tremendous success of recent urban biometric surveys, which have the ability to detect low populations of citrus blackfly, the U.S. Department of Agriculture intensified surveys in areas where the most recent, isolated blackfly infestations have been discovered, as well as in some surrounding counties. Approximately 40 persons were hired to accommodate the 33,000-point survey. Originally, a 3,300-point survey was planned for Okeechobee, St. Lucie, Martin, Indian River, Osceola and Brevard counties, but infestations discovered near the citrus belt prompted a ten-fold increase in survey efforts.

Approximately 1,600 nurseries and stock dealers are presently under regulation for citrus blackfly. Certification of host fruit for homeowners is another important regulatory activity. Since February 1977, 22,196 packages were examined and 538 were found with leaves. Eighteen of these were actually infested with blackfly.

Since July 1, 1976, industry has been paying the full cost of the spreading decline program with the exception of citrus nursery inspections, clay pits and road right-of-way. On May 1, 1978, the USDA withdraw from the spreading decline program. They had been assisting the division in this program since 1955, and as the industry is now paying the cost, their policies would not permit them to participate any longer. This necessitated the state hiring additional OPS employees to accomplish the task; however, supervision of the operation was handled without any additional help.

Activities being conducted on the sugarcane rootstalk borer weevil program in Orange and Seminole counties have consisted of survey work within the regulated area monitoring fluctuation of the adult population, with primary emphasis being devoted to surveying outside the regulated area of points near citrus processing plants, harvesting companies, etc. Surveys in Orange and Seminole counties have not turned up any infestation outside the regulated area. In Broward County, however, 10 additional infested properties have been found. The total infested properties in Broward County is 17, including six nurseries.

The sugarcane rootstalk borer weevil has been intercepted 17 times on plant material from Puerto Rico, and the burden of inspecting all incoming shipments has placed an extreme hardship on the division's inspection force. It is hoped that the situation will eventually be remedied by the U.S. Department of Agriculture placing a quarantine

on Puerto Rico for this insect and assuming a responsible role in the certification of plant material.

Bureau of Entomology

In one of the most important and far-reaching developments since the establishment of the Florida State Collection of Arthropods, on August 29, 1977, Florida A&M University joined the Florida Department of Agriculture and Consumer Services and the University of Florida as the third state institution supporting housing, utility and continuing development of the state arthropod collection. Through this agreement the reference and research collections at Florida A&M, located in Tallahassee, is on aquatic insects, and the collections there complement the collections in Gainesville where special emphasis is placed on arthropods related to control of agricultural and urban pests. FAMU collections, including currently owned private collections, include one of the world's largest and finest collections of *Ephemeroptera*.

During the fiscal year, 125,457 specimens were identified from 8,596 samples received. The number of specimens added to the Florida State Collection of Arthropods was: 43,467 pinned and labeled specimens, 4,640 slide mounts, 5,323 vials, and 13,019 papered specimens, for a total of 66,449 processed specimens.

Bureau of Nematology

Improved service continued to be a prime objective of the bureau this year. The laboratory received and processed 14,000 soil and root samples which were submitted from individuals seeking certification for interstate shipments of Florida-grown plant materials. A slight decrease in the total number of samples from last year reflects a degree of economic awareness resulting from the fee-per-sample schedule which has been initiated for certain categories of nematode certification. Nematode survey activity declined and botanical services provided some 1,600 identifications of plant specimens this year.

A survey of nematodes associated with citrus was initiated this year, and a project designed at differentiating the races of burrowing nematode, *Radopholus similis*, continued. Greenhouse tests are being continued to evaluate the effects of plant parasitic nematodes affecting different ornamental plants.

Bureau of Plant Pathology

Sugarcane smut, a serious disease caused by the fungus *Ustilago scitaminea*, was reported for the first time in the continental United States on June 28, 1978, near Clewiston.

The disease currently poses a serious threat to Florida's 325,000-acre sugarcane industry. A cooperative survey, conducted by the state and federal departments of agriculture, was initiated 24 hours after its discovery with the purpose of delimiting the infested area and to ascertain which commercial and developing varieties are susceptible.

Carter P. Seymour, the division's chief plant pathologist, visited the citrus industry in Argentina, along with two plant pathologists from the University of Florida's Institute of Food and Agricultural Sciences (IFAS). The purpose of this trip was to observe the outbreak of citrus canker reported recently in that country.

There appears to be a good prospect that a cooperative research project will be set up between the University of Florida (IFAS), INTA (the national research and extension agency in Argentina) and the Florida Department of Agriculture to work on better control procedures for citrus canker for the mutual benefit of the countries involved.

A plant tissue culture laboratory is now operational in the bureau. Initially, this laboratory will operate in conjunction with the quarantine facility at the division in order to free introduced citrus clones from hazardous viruses and other pathogens. Eventually, these techniques will be used by other important plants of commercial and aesthetic value.

Bureau of Apiary Inspection

Florida continues to be ranked in the top three states in the nation in value of honey produced and in 1977 was number one. Florida's honeybee population, estimated at 375,000 colonies, produces sales of \$25 million to \$30 million. It is also significant that \$50 million worth of agricultural crops depend upon these honeybees for pollination.

During the year, 260,152 honeybee colonies were inspected in 5,872 apiaries; 1,989 colonies of American foulbrood were found and destroyed. Although this disease continues to present a threat to the Florida beekeeper, Florida's disease rate is 0.7 percent, one of the lowest in the nation.

Personnel in the bureau examined and certified 31,817 colonies for queen and package bee producers.

Bureau of Methods Development

This bureau has cooperated with the U.S. Department of Agriculture, the University of Florida, the state of Mississippi, and other division bureaus on several projects during the past year. These projects include a rearing facility for citrus blackfly parasites, fumigation of fruit, and the use of Ferriamicide in controlling the imported fire ant.

In cooperation with the USDA (APHIS) and the Division of Plant Industry Bureau of Special Programs, a rearing facility has been designed and is in various stages of construction.

Modifications have been made on equipment in the fumigation chambers at the Doyle Conner Building in search of methods which will reduce the hazard to chamber operators and increase the efficiency of removing the ethylene dibromide (EDB) from the cartons and fruit following fumigation. Very little fumigation equipment is available from commercial sources, requiring that those involved in fumigation work use their ingenuity in developing better equipment. A method of measuring and applying EDB has been designed which is a completely closed system, assuring that the operator does not come into contact with the EDB in its liquid form.

The imported fire ant bait Ferriamicide is a recent development, and considerable testing must be done to meet the label requirements of the EPA.

The bureau has been cooperating with the Mississippi Department of Agriculture and Commerce, the USDA-ARS and APHIS divisions in tests to provide needed data. Efficacy tests on Ferriamicide as well as monitoring studies of soil, leaves and various animal life have been conducted.

Ferriamicide is a new bait containing Mirex which has been treated to cause more rapid degrading of the Mirex. On January 1, 1978, the EPA label changed on Mirex bait disallowing aerial application. On July 1, 1978, the Mirex label was discontinued. An emergency label was then issued to the state of Mississippi for the use of Ferriamicide. The EPA, in its issuance of the label, restricted the use of Ferriamicide to mound-to-mound treatment for the imported fire ants, with broadcast application allowed in parks, schoolyards and cemeteries.

The state of Florida has requested a similar label permitting the use of Ferriamicide. Complications have arisen in that the Environmental Defense Fund (EDF) has brought legal action against the EPA because of their approval of Ferriamicide. The EPA will not act on Florida's request until the litigation involved with the action of the EDF is completed.

Bureau of Citrus Budwood Registration

Program activity in the bureau continues strong with a few more participants being added this year. Total participants now number 541. In a survey conducted in late 1976, of 40 citrus nurseries producing 95 percent of all citrus trees being grown in Florida, only four failed to utilize registered scion blocks as the major source of their budwood. Production in these nurseries amounted to only eight percent of Florida's citrus tree production.

Indexing of plants derived from shoot-tip grafting continues on 36 selections representing 16 varieties. This important work, begun in 1976, will enable these varieties to be used on a wide range of rootstocks previously prohibited by virus disease problems.

Eight navel, five Valencia, and one selection each of Bearss lemon and Tahiti lime from shoot-tip grafting have been propagated for addition to the foundation grove in the spring of 1979. Selections will be observed for typical horticultural characteristics before budwood is released to the industry for commercial use.

Cooperative work on various projects with staff members from the University of Florida's Institute of Food and Agricultural Sciences and the U.S. Department of Agriculture research agencies in the area of tristeza, exocortis, young tree decline, yield trials, and indexing techniques continues to be mutually beneficial.

Don Bridges retired as chief of the bureau, effective December 31, 1977, after more than 20 years of service to Florida agriculture. Bridges worked in the budwood bureau for 18 years, serving as its chief for 14 years. Charles Youtsey was appointed chief of the bureau early in 1978.

DIVISION OF STANDARDS

Sydney D. Andrews was born in Tallahassee on July 23, 1915. He attended Florida State University and Biarritz University in France. During World War II he served in Europe with the U.S. Corps of Engineers. In 1933 he joined the department as a laboratory assistant, was later promoted to assistant oil analyst, and then to chief of the Petroleum Inspection Section. In 1963 he was made assistant director of the division and then director in 1968. He is past chairman of the National Conference on Weights and Measures and currently vice president and chairman of the Committee on Petroleum Products and Lubricants for the American Society for Testing and Materials. He has been appointed by the President to serve on the United States Metric Board.



The Division of Standards is charged with the responsibility of administering Florida's Gasoline Inspection, Antisubstitution, Brake Fluid, Antifreeze and Weights and Measures Laws. Its work, carried out through a coordinated program of field and laboratory testing, is oriented to protecting both consumer and businessman.

The division headquarters and main laboratory are located in a modern testing facility in Tallahassee. In the field, the division has a highly trained inspection force conducting a variety of tests on all kinds of commercial weighing and measuring devices and drawing fuel samples for quality analysis in the laboratory. Specialized field equipment such as mobile laboratories and large scale test units equipped with up to 24,000 pounds of test weights add to the completeness of the program. A branch laboratory having the latest field testing and weights and measures calibrating equipment is located in Port Everglades, serving the needs of consumers in South Florida.

In the division's Bureau of Petroleum Inspection, the testing of petroleum products, brake fluid and antifreeze from both a quality and quantity standpoint safeguards all parties and points out to the industry careless or unscrupulous operators.

The Bureau of Weights and Measures inspects and tests weighing and measuring devices throughout the state to assure fair transactions in the marketplace.

Bureau of Petroleum Inspection

More than 4.6 billion gallons of gasoline and kerosene are sold in Florida annually. During 1977-78 over 76,000 samples of these products as well as diesel fuels, burner oils, lubricating oils and brake fluids were drawn from retail and wholesale outlets by bureau inspectors for laboratory analysis at one of the two permanent laboratory sites or on one of the four mobile field units.

The 1978 Legislature passed a law authorizing the department to set minimum standards for automotive antifreezes and coolants. This year, the bureau will begin a registration and testing program for permanent-type coolants, giving quality assurance to users of these products.

Gasoline is tested for antiknock quality, volatility, sulphur, lead and to be certain it has not been contaminated with water, foreign material or other kinds of fuel. The quality of diesel and heating fuels is also checked to be certain safety standards are maintained and the product will perform properly in power and heating equipment. Brake fluid is an important part of the vehicle braking system. Its reliability and performance are assured through a mandatory registration and quality inspection program administered by the bureau.

Petroleum inspectors also make periodic tests on gasoline pumps, petroleum meters, vehicle tanks and liquefied petroleum gas meters at both wholesale and retail outlets. In 1977-78, better than 162,000 inspections were made on these devices. Those found inaccurate or incorrect were either condemned for use or placed under correction order. Investigations are made to determine the cause of violations. Normal wear through use was the cause in the majority of cases. But, because of the inspection most companies have regular maintenance

programs so they can be certain that measuring equipment is always up to state standards. The combined programs of inspection and owner maintenance are effective in keeping violations to a minimum in Florida.

The laws and regulations governing petroleum measures and fuel quality are under constant review by division and bureau personnel. These, along with test methods and laboratory equipment, are modified or upgraded whenever necessary to be certain Florida's consumers and industry receive protection under current and uniform standards.

Bureau of Weights and Measures

Laboratories of the bureau house the primary state standards of length, mass and volume that are directly traceable to the National Bureau of Standards in Washington. From the laboratory, state weights and measures inspectors and other regulatory personnel receive calibrated standards and equipment to test all weighing and measuring devices used in Florida commerce.

In recent years, bureau responsibilities have grown, principally from scale testing to a coordinated program assuring that all weighing and measuring devices show true value. Technical personnel and inspectors undergo continuous training to keep up with modern technology as traditional measuring systems are replaced with new, advanced methods and equipment. Grocery store scales, taximeters, odometers, linear and fabric measuring devices and package goods sold from every retail shelf in Florida are inspected to be certain they give accurate quantity information. During 1977-78, approximately 85,000 inspections, tests and calibrations were performed by the bureau in the laboratory and field. Weights and measures found measuring inaccurately or incorrectly were removed from use.

During the fiscal year, bureau inspectors randomly tested packages of non-food commodities valued at over \$330,000. Fifteen percent of these were found to be short measure and were stop-saled. Following each stop sale, shortages were investigated and deficiencies corrected.

The moisture content of grain is of vital importance to buyer and seller, because grain is sold by weight. Moisture in grain affects weight at the time of sale and special measuring devices are used commercially to establish moisture corrections. In 1977, the Florida legislature amended the Weights and Measures Law, giving the bureau authority to inspect commercial moisture meters. The bureau is now conducting field tests on commercial meters, so users of this equipment can be confident of the measuring accuracy and performance.

Recognizing the importance of owner and user appreciation for weighing and measuring devices, the bureau encourages and sponsors self-maintenance programs. The laboratory certifies weights and other measurement standards for authorized scale mechanics and industry. It cooperates with county and municipal governments in developing programs at the local level, giving weights and measures the broadest possible coverage.

The bureau is equipped with metric measurement standards and expertise in metric and is capable of assuring fair and accurate measure in the new system as the United States goes metric.